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VETERINARY MEDICINE

JANUARY 1946

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VOL. XLI
No. 1

Entered as second-class matter Nov. 8, 1929, at the post office at Chicago, Ill., under the Act of March 3, 1879.

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VOL. XLI JANUARY, 1946 No. 1

Published Monthly by the
VETERINARY MAGAZINE CORPORATION
7632 S. CRANDON AVE., CHICAGO 49, ILL., U.S.A.

$4.00 a year; per copy 50 cents; Special Issues $1.00

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Entered as second-class matter Nov. 8, 1920, at the post office at Chicago, Ill., under the Act of March 3, 1879. Entered as second-class matter under the title of American Journal of Veterinary Medicine July 19, 1910, at Chicago, Ill., under the Act of March 3, 1879.

D. M. CAMPBELL, *Editor*
7632 S. Crandon Ave., Chicago 49, Ill.
Telephone South Shore 7160

H. J. MOSTYN, *Eastern Representative*
87-09 Clio Ave., Hollis, N. Y.
Telephone Hollis 5-0712

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Reflections on the Planning of Small Animal Hospitals

By Horst Schreck
El Paso, Texas

THE "animal hospital" is a supply to a demand. The demand is created by the universal failure of animals to maintain permanent good health, or by the desire of their owners to have certain operations performed on his property.

The veterinarian is the logical one to satisfy this demand. In this condition some men see a natural process of everyday life and they conduct their business accordingly. They have an office and kennels, also bottles filled with liquid medicines or tablets. They also have a few instruments and, in the course of events, they contrive to bring these different elements together for a certain effect upon an animal in their charge. This accomplished, the transaction is over, and the animal's owner is supposed to pay for the phenomenon.

Other veterinarians see, in these circumstances, an opportunity. They realize that their training, together with good business practice, has placed them in a position to render their community a real service. The primary purpose of a small animal hospital is: To afford the veterinarian an opportunity to apply the knowledge, experience and skill of his profession to animals in his care with satisfaction to his clients and profit to himself. The hospital should be an asset to the community and afford its inhabitants a means of having their pets and other domesticated animals properly hospitalized and treated by a competent veterinarian whose skill and service are in keeping with his fees, which must be reasonable and just. A Veterinary Hospital should afford its owner a profit. This profit should be an item altogether separate from the profit that his practice should produce, i.e., from the fees for his professional service. This hospital profit must be the result of capital investment and hospital management. For that reason, it is logical that the hospital of a very mediocre veterinarian of business acumen and superior managerial ability will often outstrip that of a good veterinarian lacking these qualifications.

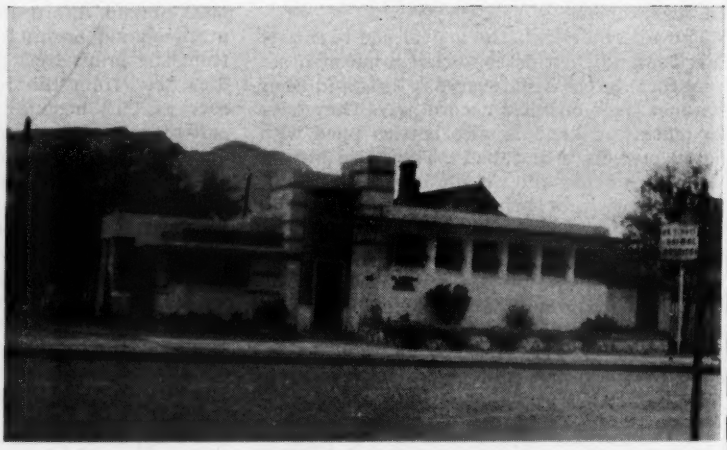
In building projects, the one thing that is, and always will be, in the front rank is *value*. Value is not cost. Value is the scale of return on investment. A $10,000 building with an 18% gross return has greater value than a $50,000 structure affording a 10% gross return. What then creates value in a building? It is the proportion of lot area to productive area. In other words, value is found in that building that presents a large productive proportion in comparison to its non-productive proportion.

Any or all of the non-productive units are necessary to give value and make possible the use of the few productive units. It readily can be seen that they may completely submerge the productive portion of the hospital. Their

encroachment upon the total available area is so insidious, that it is possible they may become completely parasitic and choke all possible profit out of a building. Mere elimination of their names will not eliminate this danger or cure the condition, for their presence is always real, and the expedient of ignoring them does not annul them. They may be consolidated and the inactive space of one unit serve as the inactive space of another, but they will ever be a sizable load on Mr. Overhead's shoulder.

The deeper we probe our problem, the more we become aware of the fact that it is essential that we have a well defined, mental plan of what we expect to do, before we can even make a rational start at planning a hospital. The policy and purpose, with an outline of the proposed management, must be well defined and, once established, it must be adhered to without deviation. A sound principle conscientiously followed will, eventually, result in a sound outcome. All who will be active in the management and the operation of the hospital, should be taken into consultation with the designer, to attempt to bring to materialization those points that are known to each to be of value in his particular department.

The purpose of each unit must be clearly foreseen. The equipment to go therein clearly visualized and accounted for. No equipment will find its own place if the designer has not the foresight to provide for it. In a hospital, as in a residence, we must be aware that each cubic foot of space consumed reduces our available funds. It is an absolute impossibility to build as complete a layout for $8000 as can be done for $20,000. Promoters can do this; builders cannot. If we assume then that we can build a reasonably complete hospital on a given lot for $15,000, we must realize that the only way open to us with only $10,000 available, is to reduce the quality of the building or the floor area or the cubic content of the structure. The total cost of the building can be lowered very little by reducing the quality of the building material. Change of building type will do more in this respect. In fact, we can reduce the building standard so low that it becomes a mere shed—under the pretense of being a veterinary hospital. The most efficient way to bring our building program within our financial sphere is to shrink our ambitions to the hard realities of building economics. Consolidation will do the trick. Elimination and consolidation must be the key of the program. Certain units of both productive and non-productive character, can neither be consolidated nor eliminated. With this conception clearly in mind, proceed with your plan to build a hospital to accommodate a certain number of animals. Daily notes on ideas bearing on the planning and equipment of the hospital are of great value. Eventually they will have to be simmered down and the impractical, or otherwise unsuited, eliminated.



This attractive building is the hospital of the author. It includes all the desirable features mentioned by him in this article. It will be noted that full advantage is taken of light and air. Outdoor runs extend a considerable distance beyond the right margin of the photograph and there is ample parking space, not shown, at the left. This hospital is in a business district, some three miles from "down town" El Paso. It is on U. S. 90, the southern route from coast to coast, 822 miles from Los Angeles, 2089 miles from New York

Equipment

Equipment is of two kinds:

1. Permanent or stationary (built-in, fixed) equipment.

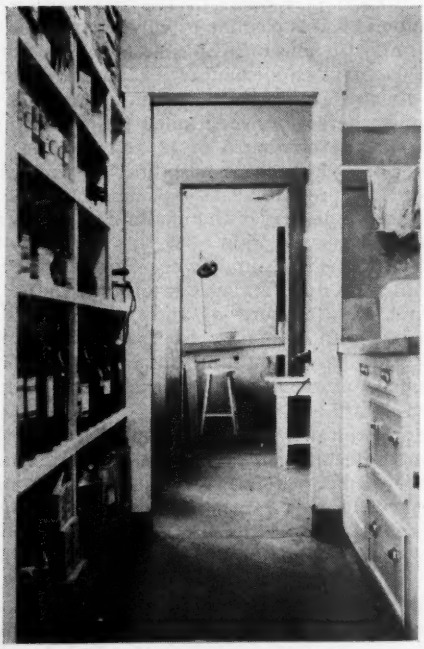
2. Movable equipment.

Both kinds of equipment require the same consideration in planning. The one, in the planning the hospital building as a whole and the other in the planning of the elements (units) of which it is made up. Adequate units or elements will usually be the result of properly placed movable equipment. The satisfactory hospital will be the result of well

planned elements and equipment arranged in a logical, practical and economical manner.

Built-in or fixed equipment requires structural provision to take care of it in the building. It may require heating, plumbing, ventilating or electrical connection to render it useful. Movable equipment is as essential as fixed equipment and must be allotted its proper amount of floor or wall space to make it useful. Its character, size and position must be accurately predetermined and definitely provided for.

In general built-in equipment will consist



Judicious use of empty wall spaces in passages, provides much needed shelving and cabinet space. This passageway from the examination room to the surgery serves as a conveniently located drug room

of laboratory and pharmacy equipment, built-in cases, counters, bins and shelving of all kinds, special and general plumbing fixtures, x-ray equipment, sterilizing apparatus, kennels, heating and bathing facilities, etc.

Movable equipment may comprise kennels, chairs, desks, tables, filing cases, operating tables, examining tables, basin, instrument and irrigation stands, cabinets, anesthetizing apparatus, tray carts, janitor equipment and a host of other things—all absolutely essential to the successful operation of a veterinary hospital. The matter of predetermining and locating all equipment is of prime importance in planning the building that is to receive it. Nor is it advisable to assume a size of a room and then try to fit the equipment, either fixed or movable, into it. The process must be reversed. The function of each element must be clearly visualized, all equipment to go therein carefully listed and a suitable and economic arrangement of it worked out, in this manner determining the room size. Whenever the locating of equipment is an afterthought, a cluttered up hospital that does not function properly is the result. This is especially true as it pertains to the plumbing and electrical connections. If the various rooms turn out to be too large for convenient and effective arrangement of working spaces cubic contents that have cost real money have been wasted but if the rooms are too small, inefficient operation and consequent increased overhead result. Too often such haphazard methods lead to continual readjustment and rebuilding with subsequent increased costs.

Hence, one of the fundamentals of hospital planning is the early determination of administrative and operating policy. Hospital size is determined by the number and size of the elements. Room size is determined by the equipment placed therein, and equipment is determined by the demands, requirements and ideas of the builder as to what a veterinary hospital should be. On paper the wildest fancies may be allowed to run amuck; but, as the costs are studied it will doubtless be found necessary to pull many of these fancies up to the snubbing post. However, with real analytical and constructive thought much can be done to preserve most of the salient points.

An important consideration will be the building site. This should be left to the last. If possible the final decision on this important item should be held off until area and other important items have been reasonably well determined. Of course in the majority of cases the building site is already in the builder's hands and was chosen with a view to favorable location. There are, however, so many other considerations, like geographic exposure, etc., that haste should be made slowly. Individual preference, of course, carries great weight. In large building enterprises this error is avoided whenever possible, and pure building economics are usually the guiding factor. If the building site has been decided in advance nothing further can be done about it.

Next will come a decision as to the number of kennels of various kinds. The proposed kennel management policy for both sick animals and boarders. This will to some extent influence the amount of open space joining the building that is required or desirable. The method of veterinary attention to the animals appears next and will establish the type

of examining room, the desirability of separate surgery or work room, the bathing and clipping facilities and feeding provision. After all these items have been considered in their proper relation we revert to the non-productive units, starting with the reception room, which should be given studied thought.

The determination of the number of kennels is an indefinite task. Formulae have been provided for it, but actual practice has often upset them. Taken as a whole, the average percentage of large dogs, very small dogs, average sized dogs and of cats is fairly constant. Assuming a hospital of 50 kennels, plans should be made for eight large kennels, eight small kennels and 34 kennels of standard size. This may vary in different parts of the country, and practitioners who have kept records in the district in which one is interested may be able to give us more exact data. The guiding unit of all hospital construction is the bed. In veterinary hospital construction it is the kennel. The kennel more than all else governs the planning and ultimate size of the hospital. For the present kennel construction will not be discussed, but the size of kennels, like the number is important. Coming back to the 50 kennel requirement, the space needed will be:

8 large kennels (3x6)—18 square feet each or a total area of 144 square feet.

8 small kennels (2x2)—4 square feet each or a total area of 32 square feet.

34 standard kennels (3x3)—9 square feet each or a total area of 306 square feet.

This gives an aggregate area of 482 square feet.

Therefore 50 average kennels absorb a floor space of nearly 500 square feet. Some of these should have outside runs according to location and now is the time to arrange for these, based on the following considerations:

1. Exposure to natural light and air.
2. Access and intercommunication.
3. Cleaning facilities.
4. Relative location to other proposed units.

Kennels should be divided off into various wards according to their purpose. The number of wards should depend largely upon the proposed size of the hospital. In the large hospitals designed to care for a comparative large number of cases of the various ailments, the segregation of patients into the various groups resulting in the best room size. The best room in separate wards, should be considered. Of necessity in small hospitals the consolidation of these groups into two wards should be considered. Perhaps, one for all cases except distemper and the other for isolation cases. It must not be assumed that this segregation will solve the distemper problem in a hospital; however, it will aid materially in its control.

The ultimate cost of a hospital will be determined by the efficient arrangement of all units. Every conceivable arrangement should be thought of and tried out on paper. Some will be of no value at all while others will lead on toward perfection in the distribution of equipment. It is possible by careful and studied planning to lower the hospital cost as much as 50%. Just an elementary example will serve to illustrate this point. Assume that the 50 kennels heretofore mentioned are placed into two wards; one ward of 16 kennels and the other of 34 kennels. A hospital that would lay claim to pretentiousness would arrange its kennels so as to give the maximum of appearance, space and light. Let this be "Hospital A." Another hospital whose owner is not financially flush and whose business does not stand the pressure of top prices, finds it necessary to economize on space to the limit. Let this be "Hospital B." Each hospital has found it practical to place a drug station into every ward.

In Hospital B economy of space is essential, double decking of kennels is permissible and since all kennels are placed against the outside walls, sky lights are employed or high windows eight to ten feet from the floor.

Counting the building cost per square foot for each hospital to be the same: The following illustrates the comparative cost of the two structures: The same would hold true for any other unit of the hospital. Hospital A would have a reception room, office, examining room, surgery, pharmacy, work room, bath and clipping facilities, kitchen—each an individual unit while Hospital B would have the reception room and office combined, an examining room, pharmacy, surgery and work room combined, bath and a clip and kitchen combination.

This indicates a saving of 434 square feet in addition to the saving already made in the kennel arrangement. Since all units in Hospital B are much more interlaced, there would be less unproductive space in corridors, hallways, etc. The number of outside runs and their size could also be reduced, thus the two hospitals would be of equal capacity but of greatly different cost.

Economic equipment arrangement gives economic room size, the best arrangement

sizes brought together will result in the most economic hospital layout. Several possible solutions should be studied in the rough and, once selected, it should be adhered to and further developed to the final working plans. Let us assume that no definite building site has been selected and that a choice of several locations is available. The only mandatory condition is that the number of kennels must be 50, of the sizes mentioned. With these kennels as a nucleus we prepare then a list of all other requirements.

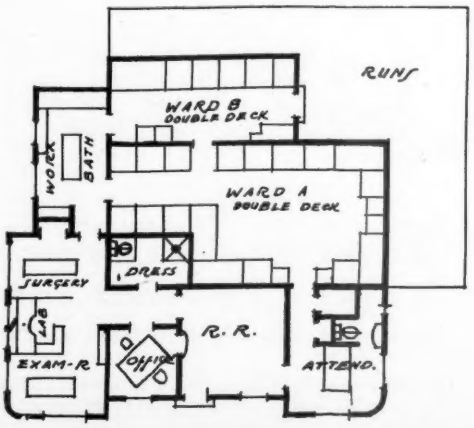
The Components of the Productive and Non-Productive Portions of a Hospital

Hospital A

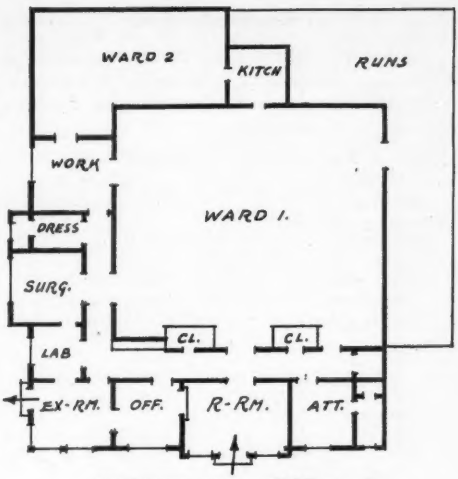
Non-Productive	Productive
Reception room	*Examination room*
Office	*Surgery*
Dressing room	*Pharmacy*
Work room	*Clip and bath*
Laboratory	*General ward*
Kitchen	*Surgical ward*
Morgue	*Cat ward*
Garage	*Isolation ward*
Reception ward	*Boarding kennels*
Runs	*X-ray*
Toilet and bath facilities	*Maternity ward*
Attendants' room	
Closets	

Hospital B

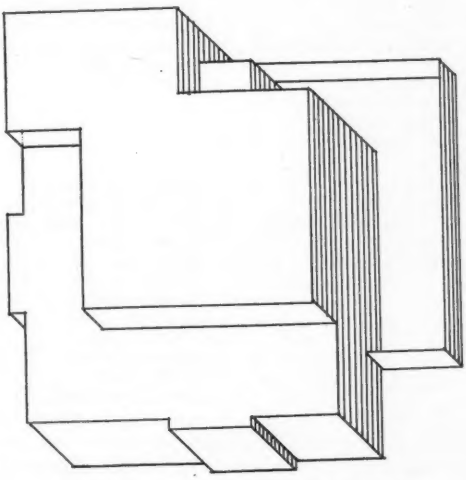
Reception room and office	*Examination, Pharmacy and Work room*
Runs	*Laboratory and X-ray*
Garage	*Kitchen, Clip and bath*
Toilet and bath facilities	*Reception, General and Maternity wards*
Attendants' room	*Cat ward and Boarder kennels*
Closets	*Isolation ward* and Morgue



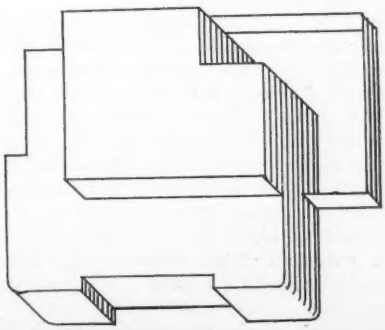
HOSPITAL "B" -1434 Sq. Ft.



HOSPITAL "A" - 2585 Sq. Ft.



Architectural outline sketch of Hospital A



Architectural outline sketch of Hospital B

Equipment List

This list is followed up by an equipment list. The fixed equipment is in italics to call attention to the necessity for making structural provision in planning.

Fixed Equipment	Movable Equipment
Vestibule	
Night Bell	Bulletin Board
Reception Room	
Telephone	Chairs of various types
Light	Costumer
Floor plugs and convenience outlets	Umbrella stand
Heating unit	Magazine rack
	Small desk
	Mirror
	Pictures
	Floor-lamps
Examination Room	
Sink	Examining Table
Small drug supply and sundry lockers	Irrigation stand
	Disposal can
Special spotlights	Instrument cabinet, if built in, fixed equipment
Overhead light	
Head light sockets	Checking system
Wall plugs	Restraint material
Concealed seat	Record arrangement
Communication with office	Movable collecting kennels
Signal Bell	
Hose attachment	
Floor drain	
Heating unit	
Office	
Safe	Desk and chair
Book case	Filing equipment
Convenience outlets	Typewriter desk and typewriter
Light	
Heating unit	Costumer
	Waste basket
	Cash register
	Bulletin board
	Dictaphone
	Client's chair
	Easy chair
	Magazine rack

A complete listing of equipment would be unduly long but it should be made out for each room in the hospital as for the examination room and office.

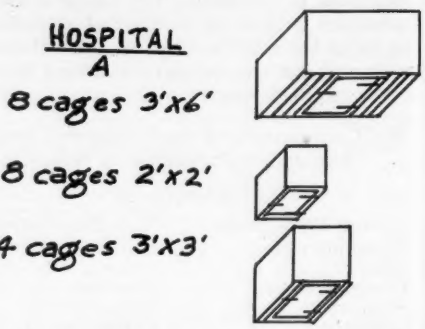
Hospital B would for two reasons call for a simplified list.

Reason 1: Reduced space available will not permit the placing of all equipment. This will especially affect the movable equipment.

Reason 2: Funds for the purchase of a large part of this equipment are not available.

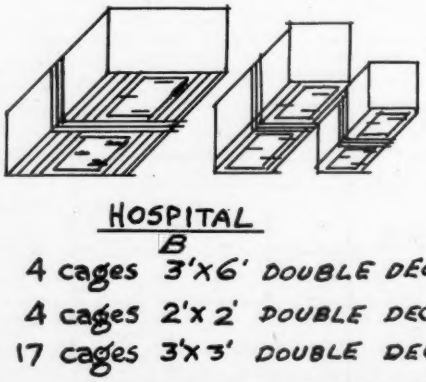
In the planning of the exterior our wishes should be vaguely kept in mind from the very beginning. This wish might have to be modified or altogether forgotten, for the reason that certain plans are not applicable to certain exteriors. The exterior or "elevation" should always be a logical development of the plan.

Referring again to equipment: It is soon realized that provision for the installation of permanent equipment cannot be modified in any manner. If this is tried, the cost in future alterations and building extras during construction will be high for this primary saving. The actual installation of this type of equipment may be avoided but provision for it must not be circumvented—as well postpone the



wiring for electric light, convenience outlets or piping for heating units. However, the actual purchase of a light-fixture or a radiator may be postponed. Space provision is made for 50 kennels, but it is found convenient now to purchase but 25. Provision is also made for a nice office with a fine desk and elegant carpet —why not do the office work at home until such time as funds become available for the purchase of these articles. Every hospital that boasts a surgery, will be the possessor of an operating table, a sink or lavatory, a sterilizer and a light-fixture of some sort.

But it is likely that many hospitals will have equal additional equipment. Methods of procedure vary, methods of restraint are different, methods of after-care are individual,

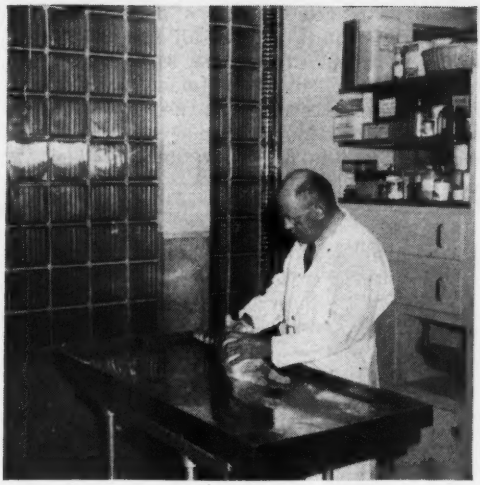


etc. As small animal practice progresses these things will become more standardized. Until then all must take advantage of personal experiences and absorb such information as appears to us to be worthwhile and applicable.

For example, the perfect kennel or perfect kennel arrangement is still a very hazy ideal, and the designs here presented are mostly for constructive suggestions and criticisms. Owners of hospitals that have used this type of kennel are very enthusiastic over them.

All kennels must fulfill certain purposes, the most important of which are: (1) Security of animal, (2) comfort to animal, (3) practicaility of handling, (4) convenience for the doctor or attendant, (5) practical sanitation, (6) ease of cleaning, (7) durability, (8) appearance, (9) natural illumination and (10) economy of cost.

The animal must be kept secure to satisfy the owner, afford the hospital control over the patient, and prevent prowling and injury to other patients. The kennel must be large enough for the animal to lie or stand fully extended in any position. The dimensions should not exceed these requirements by more than a very small margin. The door of the kennel should be large, so that the animal may be easily grasped and taken out of the



This illustrates well the fullest use of all available daylight at the same time excluding public gaze. The illumination is good day or night. Glass block are excellent both for inside partitions and outside walls

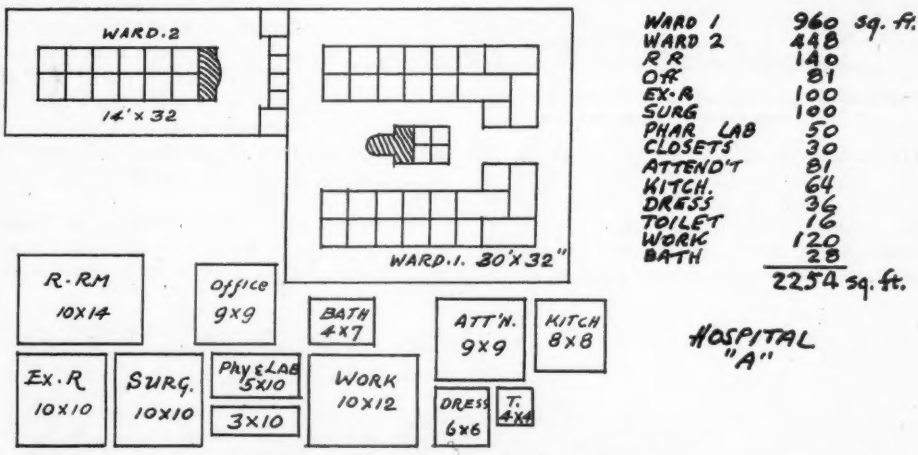


Illustration of utilization of area in Hospital A

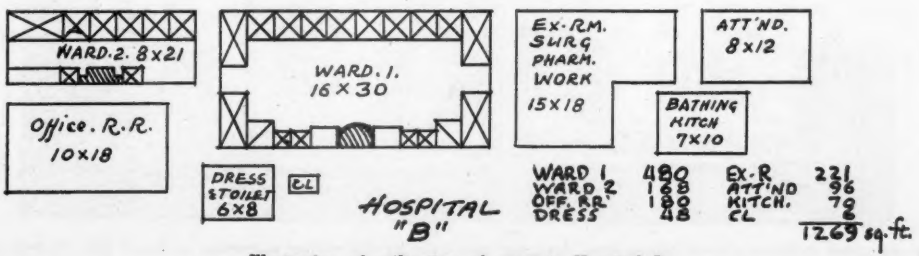


Illustration of utilization of area in Hospital B

kennel or placed therein. A floor height of 36 inches is the favorite of all who have tried it for it brings the patient to eye level for observation, or kennel treatment, saves stooping and presents more of the latero-ventral aspect of the animal to view instead of the dorsal as is the case with low kennels. All interior surfaces of the kennel must be as smooth as possible, free of cracks and crevices, shed liquid of any kind freely and be easily cleaned. Bothersome ledges and inaccessible places are to be avoided. A wooden floor should be removable for ease of cleaning and thorough disinfection. Smooth surfaces are most resistant to wear and tear, and places that present a hold for the teeth should be protected. A kennel must look pleasing to the owner of the animal and impress him with the ultimate in animal contentment. No practical access of outside light should be obstructed with anything more than iron grills. The cost must not be prohibitive, but it must not be assumed that a satisfactory kennel can be constructed cheaply.

Compactness of floor planning saves thousands of unnecessary steps and keeps building costs down

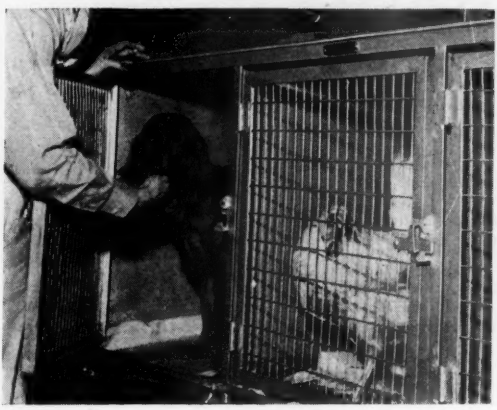
Kennels may be constructed of wood, wood and metal or metal exclusively. Tile, glazed brick or hard cement are used in the construction of built-in kennels and are applied over understructures of brick, hollow tile or wire-lath. Kennels should be of uniform size in their respective classes, to facilitate interchange of parts. Provision must be made for a removable watercup. In cat-cages a small ledge or shelf is desirable to give these animals opportunity to get off the floor. Rabies kennels should be indestructible and capable of confining a small cat securely. Boarding kennels are of a more open type and may well be constructed entirely of wire-mesh partitions, thus presenting an appearance of freedom and spaciousness. Maternity kennels should have attachments for curtains.

The drug station: Few things in a hospital will save as many steps and as much time as a properly located drug station. This should

The attractive building shown above was designed and built by the author a number of years ago. It had just been completed when the photograph was taken. Tasteful landscaping later added much to its beauty

have a wash bowl of some sort with hot and cold water, provision for hose attachment, a few shelves for liquid drugs and tablets and a cabinet containing a few sundries and clean towels. Spread of infection to the general drug source is in this manner greatly curtailed.

Clipping and bathing facilities should be well arranged and properly cared for. An old style bath-tub will, if properly placed, be serviceable, but has the appearance of an improvisation. A wash bench will often be better appreciated by the dog. The attendant should don a rubber apron and boots and go to it with a brush, soap and hose. A well drained floor under him will do the trick to a "T."



Kennels are a productive facility and should not be "stinted" as to space, location or construction. Kennels of wood, tile, glass, metal and plaster on wire lath all possess certain advantages

In these days of prepared dog foods a kitchen often is a myth. However, whatever the feeding arrangements, provision must be made for the proper washing and sterilization of all feeding dishes, utensils and water-cups.

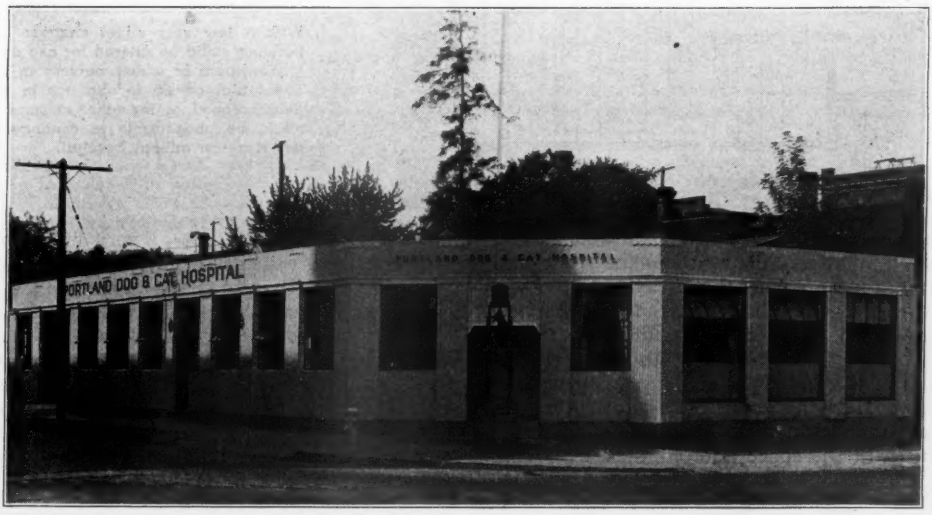
No material is more suitable for hospital flooring than concrete or tile. In the reception room and office, linoleum may play the role of substitute. Rugs and carpets are objectionable.

Proper drainage of all floors which will be hosed must be provided. Floor traps placed in logical places greatly facilitate the maintenance of sanitation by the elimination of drudgery.

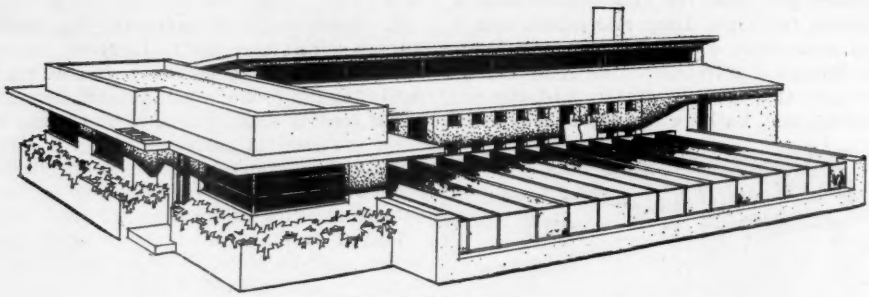
To recapitulate: Let the hospital be a building planned, constructed and equipped to house the patients efficiently; to make the necessary care bestowed upon them a pleasure and a profit to the veterinarian. Have it be a distinct contribution to the community and fulfill to the letter all the purposes of its name—"Hospital for Small Animals."

Criticism of Designs for a Small Animal Hospital

To further illustrate the principles discussed in the foregoing article, Doctor Schreck was asked to comment on the small-animal hospital plans published in the February, 1941, issue of VETERINARY MEDICINE. These plans are reproduced in the following pages with Doctor Schreck's comments appended to each.



A feature of this hospital, designed by the author 25 years ago, is the statue of a dog (center) erected at a prominent street intersection and having a driveway between it and the building

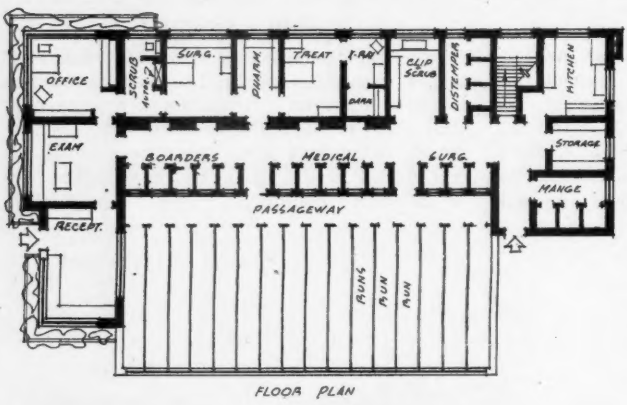


Design by John Cooper

This design is one answer to the needs of the veterinarian for a structure to enclose both office and clinic. It is not elaborate, in fact, simplicity has been the keynote. It has, however, been designed for a maximum of efficiency.

Planned for a small lot in the Southern section of the country, the hospital is compact without sacrifice of adequate circulation. Attention was given to the separation of its various functions such as reception, treatment, animal boarding, and service. The cost of the unit should not exceed $10,000 and might best be placed on a relatively level lot about 125 by 200 feet.

Fire-resistant monolithic concrete construction is suggested throughout. Much of the exterior wall surface is devoted to window area. The extensive use of glass is equally as practicable in the North as in the South. A feature of lighting is the long clerestory window treatment in the corridor between clinic and kennels. The kennels are lighted by heat resistant glass on the outside walls. Kennel blocks for boarding animals are segregated from the kennel blocks for dogs under treatment. Room is allowed at the rear of the court for ambulance parking.



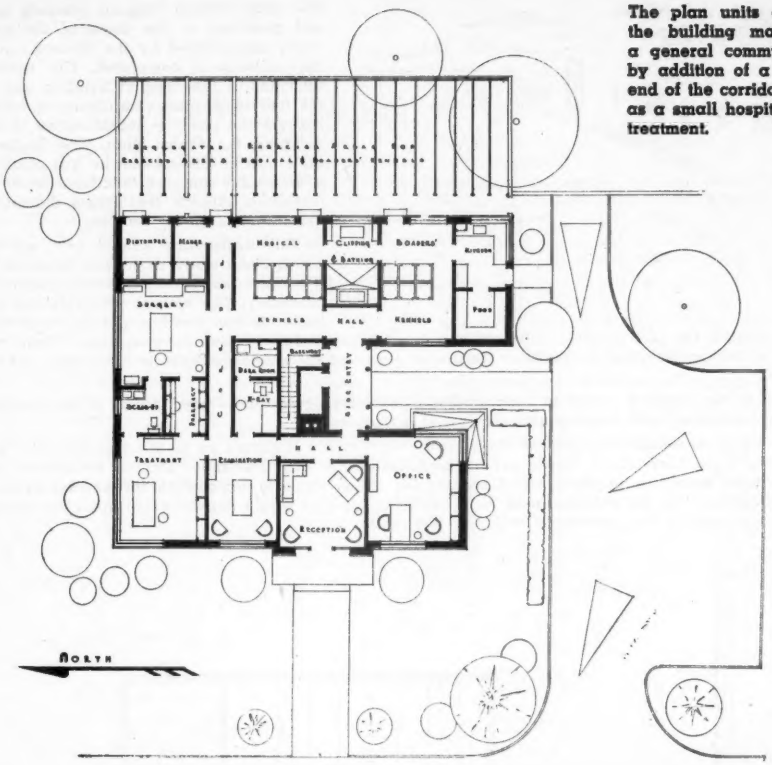
FLOOR PLAN

The court for animal runs has a southern exposure, thus gaining a maximum of sunlight—and by this orientation the long clerestory receives most satisfactory lighting. The clinic has a north exposure and so receives no direct sunlight, consequently no shadows to interfere with daylight operations and laboratory work. Special features include all built-in cabinet units, autoclave, etc., in the corridor. The office has built-in features for storage, etc.

With a few very minor changes the building could be altered for use as a kindergarten or a day nursery in the event that owing to changes in the neighborhood or for other reasons it might be undesirable to continue to use it as an animal hospital.

Comment on Plan above: This plan would be improved by interchanging the office and examination room; placing the X-ray and pharmacy between the examination room and the surgery; eliminating the treatment room and incorporating this function and the clipping room in the kennel arrangement. The kennels are too few in number. They constitute income producing facilities and should not be stinted in the space allotted.

Comment on Plan on next page: A very active veterinarian who expects to pay for this set-up will have little time to spend in the elaborate office. The plan would be more practical if the examination room were replaced with a *small* office, the treatment room were incorporated in the kennel ward and the examination room were placed in the corner. The scrub-up room and the pharmacy are well located. On the whole there are too many doors and hallways.

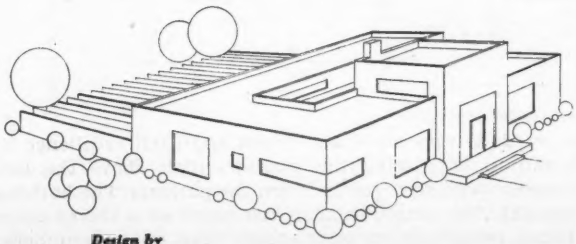


The plan units are so arranged that the building may be converted into a general community clinic easily or, by addition of a bedroom wing at the end of the corridor, it might be adapted as a small hospital for specific disease treatment.

Two of the factors controlling the design of this building were circulation and orientation. An effort was made to arrange the rooms and corridors in such a manner as to provide logical handling of the animals as they are brought into the building, carried through their treatment period, and returned to their owners. In doing this the necessary handling of the animals while under treatment for long or short periods was kept in mind. A rear entrance is provided which is handy to both kennels and to treatment areas. The scrub-up and pharmacy are located conveniently between the surgery and treatment room.

The building should face to the west for best orientation in each unit. The kennels then receive east and west light. North light would be provided for the surgery and treatment rooms—as in the case of hospitals for human patients.

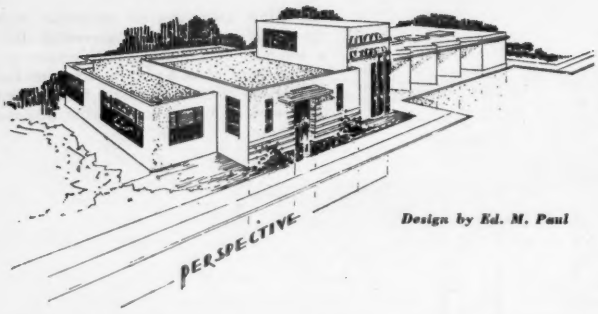
Construction cost would vary from $8,000 to $12,000, depending on different materials and equipment. The building is designed for construction in concrete, stucco on tile or brick or similar masonry material. It would have steel windows, linoleum floors, steam heat, fluorescent lighting, etc. It would require a level plot of ground which should have frontage of at least 150 feet.



Design by L. C. Worthy

PERSPECTIVE OF ABOVE

Some of the advantages of this plan are in its compactness, easy accessibility from one interior area to another, and in the economical use of corridor arrangement. The separate units of the building are well related to one another from the standpoint of their particular uses.



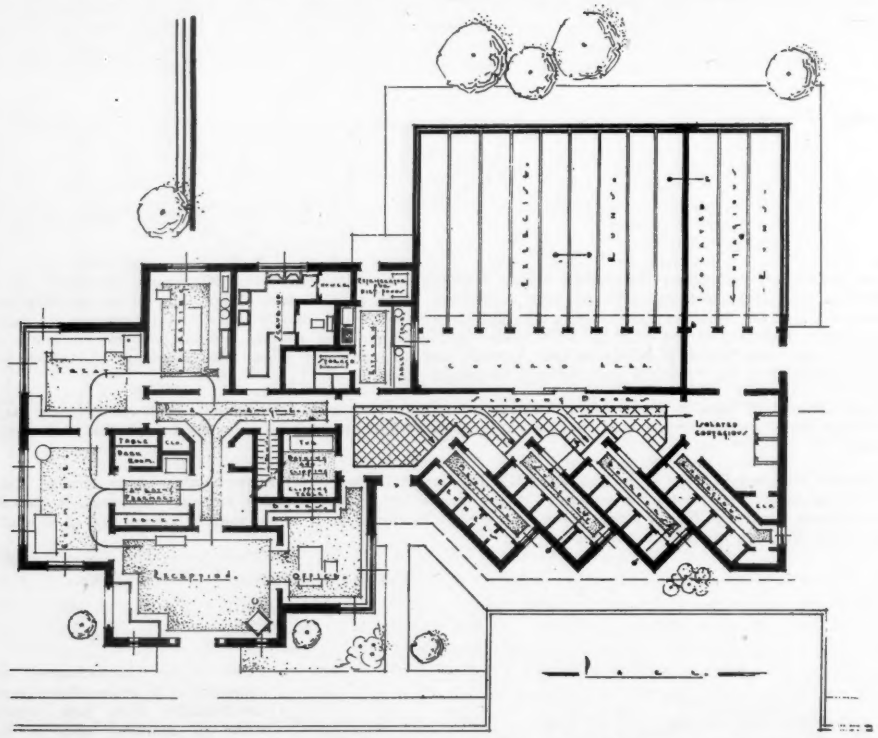
Design by Ed. M. Paul

The small animal hospital presents special problems to the designer not generally appreciated by the layman—until the building is completed. The special functions of this type of building and of the individual units comprising its whole become the primary consideration in developing the sketch plan. The designer feels that in this scheme he has attained a distinctive unity of functional architecture in a solution that meets the major requirements of the problem.

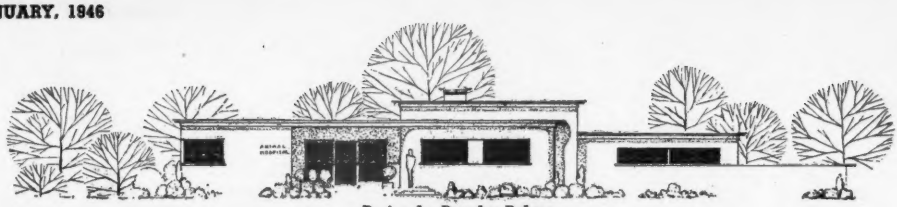
In this design the kennel unit will be worth close study as it was designed in a manner that seems to permit maximum efficiency. The kennel entrances are adjacent to one another and to a separate work table at each entrance for each kennel. This solution presents a satisfactory plan for utilization of light and ventilation. The kennel feature becomes a dominant feature of plan and elevation and reflects the function of the building as a whole.

The office is adjacent to the spacious reception room and is also easily accessible to other rooms of the hospital. Its distinctive window treatment, both interior and exterior, is a feature.

The hospital is designed for construction in hollow tile with a stucco finish. It should be on a lot about 150 x 200 feet. The enclosed runs, when landscaped, would not be objectionable in any residential section. Because of the special handling of kennel areas the building would not readily adapt itself to remodeling for another type of work. The hospital should cost in the neighborhood of $12,000 but this cost would depend much upon the type of interior finish and the section of the country in which it was built.



Comment: The arrangement of the wards is very novel and might approach excellence if better advantage were taken of light and air by placing the windows high above the kennels. The examination, treatment and surgery rooms are too far from the patients. The bathing and clipping room is altogether to prominent. The whole thing is too much of a merry-go-round. I think the designer will be capable of producing an outstanding plan once he understands clearly the problems involved.



Design by Douglas Baker

This hospital was designed to meet the needs of the veterinarian whose practice includes a fairly large number of small domestic animals. There are sufficient kennels for animals to be boarded as well as provision for those hospitalized both for surgery and for contagious diseases.

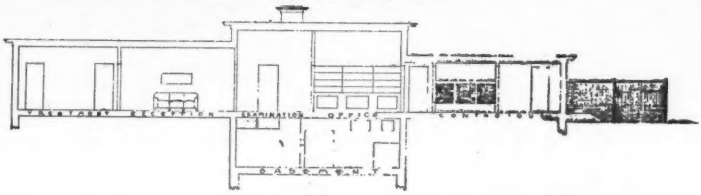
The surgery room is provided with ample storage for instruments and accessories. It is conveniently located near the scrub-up area and the pharmacy room—which both become a part of the treatment unit.

In the basement, beneath the central part of the building, are the heating system and the incinerator as well as storage area and room for the janitor or kennel man.

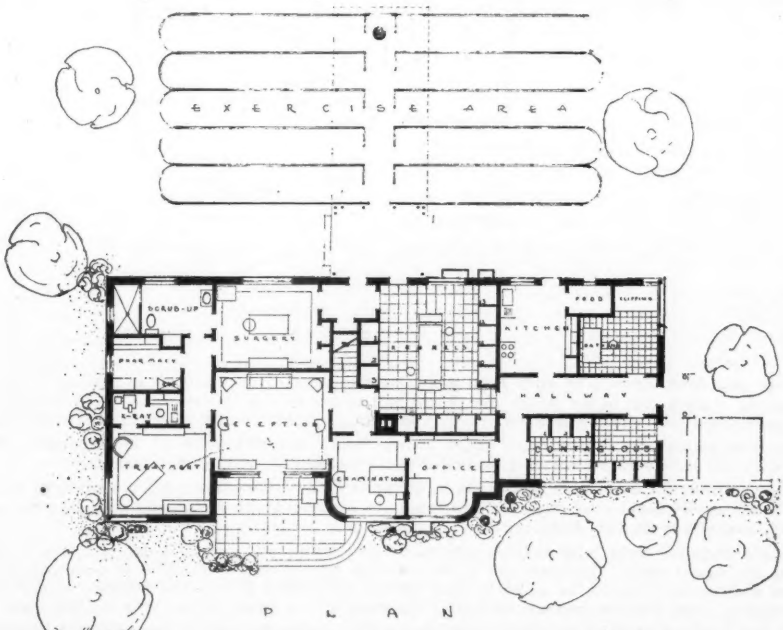
It was assumed that dogs suffering from distemper would not be able to use outdoor exercise area and so none was provided for them. No animal with a contagious disease need ever go near the boarders, or those undergoing surgical treatment or medical observation.

A kitchen is arranged for convenient access to both contagious and non-contagious wards. It has an adjoining storage room suitable for storing a half ton of dry food.

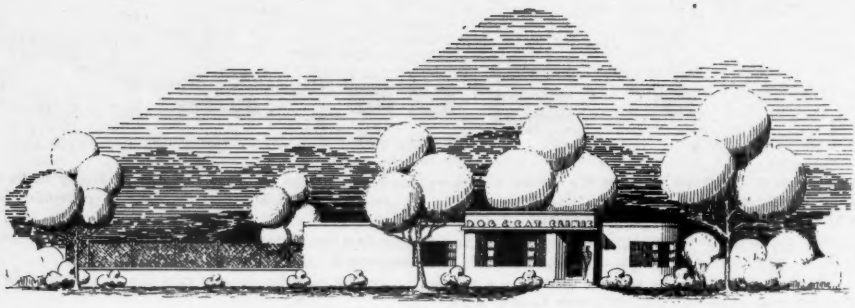
It is intended that the building be of monolithic concrete, steel windows, built-up roof and would cost approximately $9,000.00, depending somewhat on the section of the country in which built. It would require a lot of 125 feet frontage and one that was comparatively level.



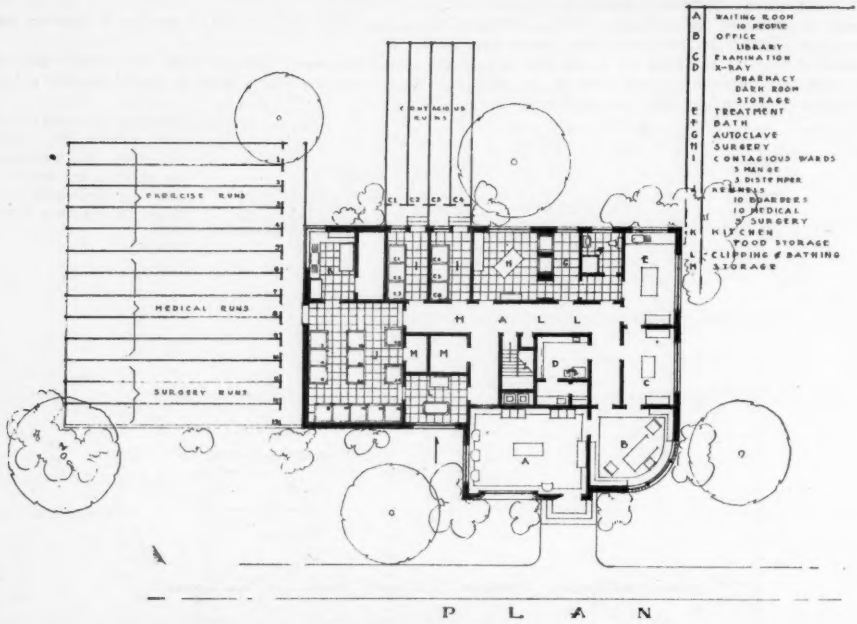
No great amount of remodelling would be required to transform the building into a tea room in the event it should ever be desirable to discontinue its use as a hospital.



Comment: The exterior of the building is verypleasing as is also the large kennel room. However, the scrub-up, pharmacy, X-ray and treatment rooms take up space that should be occupied by the office and examination rooms. Another disadvantage: contagious cases must pass through the other ward or the office to reach their destination. The plan as a whole shows lack of study to fit the interior to the functions of the various elements.



ELEVATION



PLAN

Design by Ralph O. Kiper

This building was designed to give each room a maximum of natural light and air as well as a logical place in the relationship of each unit to the whole. The X-ray unit and stair are in the center of the building since they need no natural light and with this location affords a more compact plan which would fit on a slightly narrower lot.

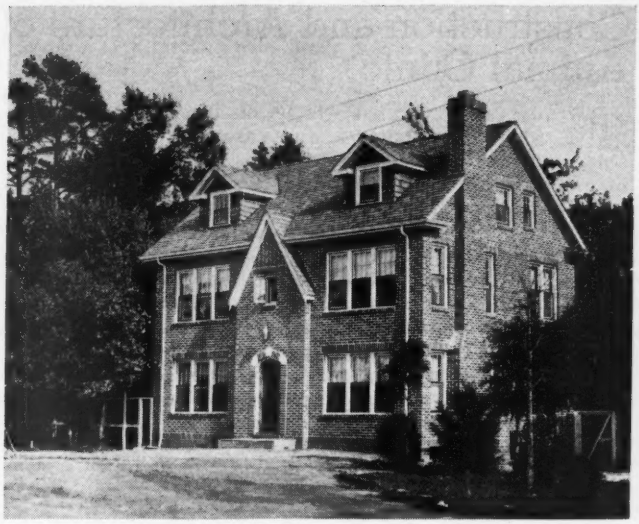
The service area in the basement contains ample storage space and all features of the mechanical elements necessary. Employees' service rooms are also located in the basement as well as incinerator, etc.

The runs are so designed as to give separation to animals with contagious diseases. Individual kennels are of concrete. In the large kennel block the cells are two units high but in the contagious ward they are of single unit height. Each kennel has its own drain and is so designed as to be easily kept clean.

The hospital is designed to be built of brick veneer, painted white with cement paint. The interior walls are of plaster with an enamel finish. The floors are of tile, concrete or linoleum. This type of construction is relatively inexpensive and the total cost of the entire hospital should not exceed $8,000. The building would fit on a level piece of property about 100 feet frontage (including the runs) with a depth normal for suburban plots.

Because of the proposed location, an attempt has been made to give the exterior somewhat of a residential character so as not to be too much out of place in residential suburban development. This same character could be further carried out in the landscape treatment around the building. In the event that it might become necessary to use the building for another purpose, it could easily be turned into a physician's office or a day nursery school.

Comment: Better unity of the examination-pharmacy, surgery and X-ray rooms should be achieved.



"DOGWOOD"

This building was erected in 1929. Much landscaping has been done since the photograph was taken, 16 years ago. It stands on a three-acre plot, four miles from Charlotte, N. C., fronting on a 44-foot, 4-lane U. S. highway. Electric current is supplied by a utilities company and water is from a deep well on the premises, equipped with an automatic electric pump.

Dr. H. Calvin Rea, the proprietor of Dogwood, was one of the first to construct an animal hospital outside city limits. He acquired the plot in January, 1926, and immediately constructed 80 outdoor kennel runways having natural drainage, shade and sunshine. Then he applied to several loan agencies for funds to construct a modern hospital. "Build a dog hospital, and in the *country!*" Without exception and not always diplomatically they advised him to consult a psychiatrist. Therefore he was forced to build a low-priced, frame office and hospital. The venture was successful from the start and three years later the building shown in the illustration was erected. The frame building has since been used as a residence for one of the attendants. In addition to the hospital facilities, the lot supplies an ample quantity of garden produce, poultry, eggs and pork for the hospital personnel.

Doctor Rea says: "The same buildings, on a lot one-fourth the size, in the city of Charlotte would have cost twice as much. Advantages of a country over a city location outweigh the disadvantages by overwhelming odds."

Store Building Converted to Veterinary Hospital

By W. M. Thies
Hillsboro, Kans.

Restrictions on building material have been such for the past three years that constructing a building for a small animal hospital has been out of the question. Hence I purchased a building on Main street. I believe that in a small town in this section it is best to locate a veterinary hospital in the business district. One gets considerable small office trade in such a location from persons who would not bother to drive a few blocks to get their supplies. In this community, a new and growing dairy section, which has had no veterinary service heretofore, the farmers have the habit of going to the drug stores for medicines for their animals. Now that I am located as convenient to the trade center as the drug stores, this trade is coming to me in increasing amounts. It includes such preparations as disinfectants and dips, udder ointment, insecticides, wound applications, calf scour medicine, poultry tablets, etc. It isn't a matter of swivel chair diagnosis. These are preparations that the farmers are going to use themselves, wherever they get them.

I remodeled the interior of my building completely and also put in a new front. It has a frontage of 25 feet on the street and extends back 120 feet. It was not the shape I should have built, of course, but was about all I could get.

The front 60 feet was equipped for an office waiting room and small animal hospital. The rear 60 feet is divided into two rooms. In one there are three box stalls, four stanchions and a "squeeze." The other room has two large doors through which farmers can drive a truck or a pickup from the alley right into the building to unload their animals. Behind the building there is a small holding corral equipped with a loading chute. The alley is paved and usable in all weather.

The front half of the building contains a waiting room in which are show cases for dispensing and a private office which opens directly into the laboratory and the examination room. Adjoining the examination room is the drug room and directly across the hall is the surgery with the general ward to the rear. The large basement has ample space for an isolation ward, storage space and also a heating plant.

This layout is not what I should like to have or hope to have sometime, but, under the circumstances, it is working out satisfactorily. It is a whole lot better than "practicing out of one's vest pocket." I believe the central location is the right one for a small village.

Construction and Architecture of a Small Animal Clinic*

By DAVID BARSKY,
Tupper Lake, N. Y.

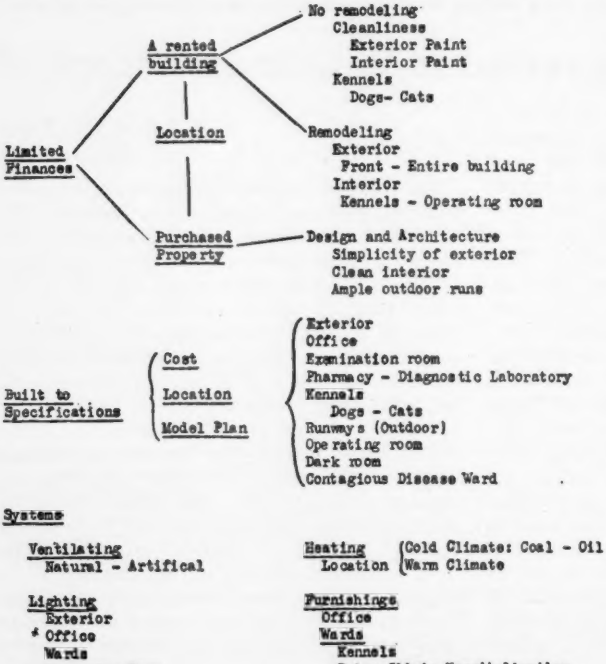
TWO types of buildings will be discussed: (1) where only limited finances are available, and (2) built to specifications. These plans are for one-story buildings.

Limited Finances—Rented Building.—The location for a small animal clinic, when the building is to be rented, is largely governed by the number of patients expected from that area. The desirability of a section in which there is no veterinarian can be seen easily. Of course, if no remodeling need be done, the expense saved is a factor which over-rides a more elaborate building where alterations must be made to adapt the structure to veterinary practice.

If no remodeling is to be done, cleanliness must be sought above all else, as any attempt upon the lessee's part to bring about this necessity entails an expense. Therefore, the paint on the exterior of the building should not be strictly adhered to, as any building that blends with surrounding property is usually acceptable.

The interior should be painted a light color, preferably grey, but one that does not soil easily and one that can be washed readily. The usual plan is to have walls medium-dark grey (almost pearl grey), two-thirds of the walls' height, with the top third and ceiling white. This paint scheme should be consistent throughout the entire clinic, with the possible exception of the office or reception room or both. In the office, the tenant may give vent to his own individual choice, the majority using conservative colors such as maroon or soft, dark green with mahogany furniture.

The kennels should be of ample size for the dogs that are to inhabit them. For the larger breeds, i.e., collies, German shepherds, setters, pointers, great Danes and similarly proportioned animals, kennels at least four feet in width and height, and approximately five feet deep are suggested. For terriers and like smaller breeds, we suggest kennels at least two and a half feet in width and height, and approximately three feet deep. If at all possible, kennels should be individually lighted. Some veterinarians favor steel kennels, but I do not approve of this plan because of the heat and sound conducting properties of steel. I prefer wooden or wood-fibre kennels with all rounded joints. Newspapers as a kennel floor covering are both economical and sanitary. Paper is obviously more easily changed, and with the expenditure of less time and effort than a sliding tray. The more simple the construction, the less probability of dirt accumulation.



Cat compartments should be of the same size as the kennels for small breeds of dogs. If possible, the cat ward should be isolated from the canine section for obvious reasons.

A Remodeled Building—Rented.—Where the

be neat and pleasing. In a city (except in the far West), the more conservative colors are desired, such as medium-dark grey, brown, or dark green. These suggested colors need

*Reprint from *Vet. Med.*, 30:6, p. 261.

owner is willing to remodel, say from a gasoline station, feed store or other appropriate building, the only necessary exterior remodeling is the front. neatness should prevail and an effort should be made to have it clash with the immediate surroundings as little as possible. The owner of the building usually will observe the veterinarian's wishes, and the veterinarian should pass final approval upon the proposed refacing before the actual reconstruction begins.

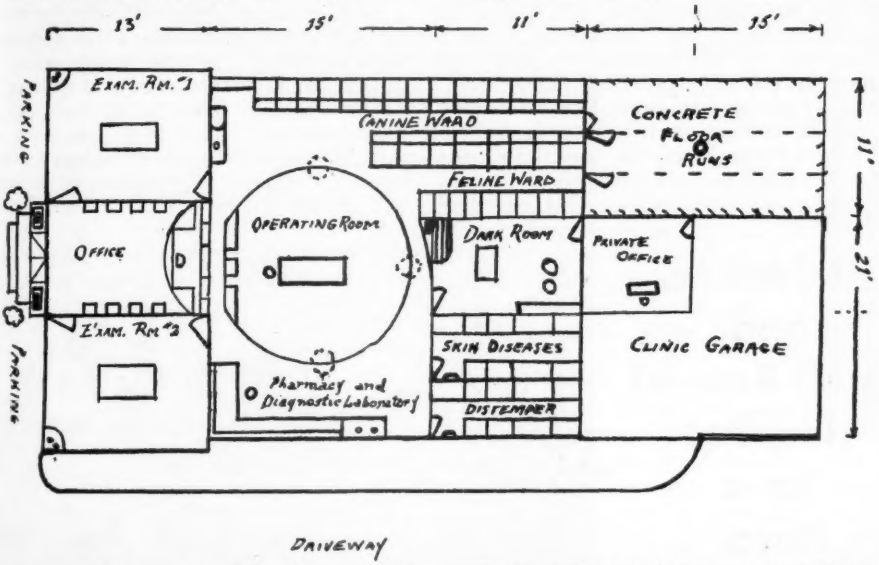
In any interior remodeling, many windows should be provided; the room with the most window space should be the kennel ward, since a well-lighted kennel ward is a welcome, self-sustaining advertisement.

In all rented property, the veterinarian must be governed by the rental fee and the period of his lease. If he plans to make his home in combination with his clinic, the rental fee should be considered as that of both a business property and a residence. The latter suggestion should be carefully considered as the advantages of a combination clinic and dwelling are many.

Built to Specifications—Cost.—The practitioner who plans to build his own clinic must be prepared to spend at least $4,000 for his land and $4,500 for the ensuing construction upon it. Some may believe this to be an extravagant figure, but one who is going to build one's own clinic should build for permanence and for economy in maintenance. Any finished clinic that costs less than the above figures is either a rare bargain, or it is a piece of property that will double its cost in following years because of poor materials, bad construction or faulty workmanship. If one must reduce the outlay below this figure, it is better to rent.

Location.—The city being the source of small animal practice, it is wise to build not too far from it. It is false economy to purchase too small an area of land. Extra land may be profitably converted into extra long, outdoor runs, a fact which I cannot over-emphasize. The surroundings and landscaping is left to individual taste. It is unnecessary to mention the advantages of a clinic surrounded by lawns and trees which add to the beauty of a modern hospital.

The following plan is one that meets the stipulated price, yet sacrifices nothing in its compactness and style. It contains a separate



ward for contagious diseases, this divided into two classifications; and includes plans for a dark room, for X-ray and other electrical equipment. All plans may be modified according to builders' or architects' views.

Building Equipment—Heating.—In the warm climates a small burner should be used for hot water purposes. In the colder climates, coal seems to be preferable to oil for financial reasons.

Ventilating.—A natural ventilating system can be utilized easily by employing shields at the bottom of the windows to prevent drafts when the windows are open. The top windows may be lowered for proper circulation.

Lighting.—The operating room should be naturally lighted only by a skylight. The absence of wall windows prevents outside contamination. The artificial lighting should be

focused, holophane lights, particularly in the operating room. In the wards, as much window space should be obtained as possible so that natural light may be utilized to the fullest extent. Proper lighting of this nature is at once economical and gives a clean, pleasing atmosphere. Good lighting conduces to cleanliness, which is a fundamental requirement for small animal clinic. In the office, the lighting may be of conventional fixture type.

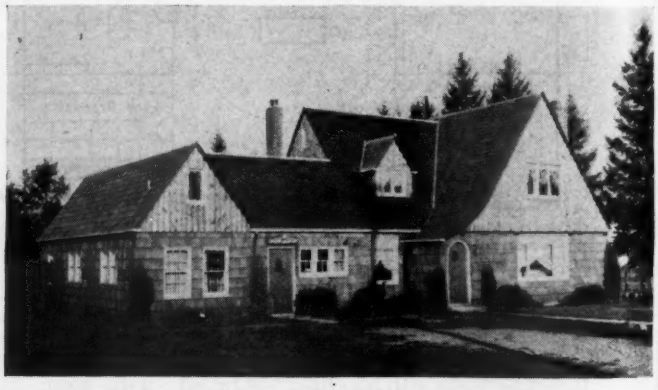
Furnishings.—In the office, standard furniture may be employed. The private office may be furnished to the individual taste, while the wards and laboratories are more professionally furnished by consulting any of the medical supply concern bulletins. The plumbing throughout the hospital is usually attended to by the building contractor, but it must be remembered that when the bathing facilities are erected, a well-constructed stand for colonic and rectal irrigations be added, preferably a non-portable stand. I would suggest the use of linoleum on the floors throughout the building except in the operating room where the tile floors are advisable.

In the plan shown, a basement has been omitted, but it is advisable to include one in the construction. The basement may be used for storage, furnace facilities and installation of an incinerator. The incinerator used for burning deceased patients (and saving the ashes), is practical and worth-while.

The concrete floor runs may be used alternately so that dogs cannot come in contact with each other.

It is a good plan for the prospective builder of a small animal hospital to visit established clinics. From these, he will probably glean ideas which may be incorporated in his own plans. In any clinic that has been designed for permanence, the following points are fundamental: A pleasing exterior, which is necessary to form a favorable first impression; a neat, cheerful reception room, which continues the first impression; a well-lighted kennel ward containing large, airy kennels, which lessens the reluctance of animal owners to the possible "caged" condition of their pets; and finally, sanitary, concrete floored runs of unskimped dimensions, which support a famous hospital's slogan: "the welfare of your pet is our greatest desire."

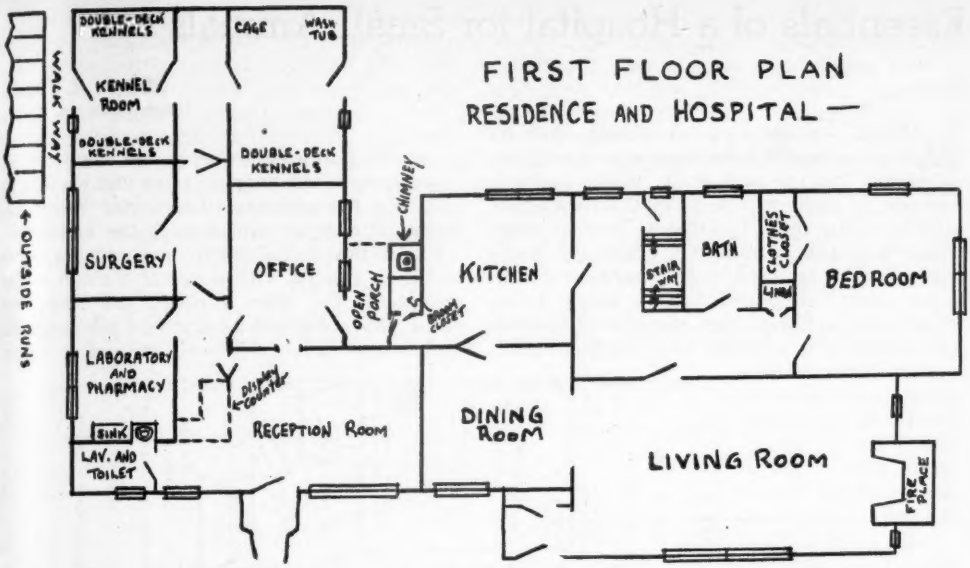
Residence and Small Animal Hospital for a Rural Practice



Hospital and residence of Dr. John S. Stevens, Sequin, Wash.

The hospital and residence shown in the above illustration was erected in the summer of 1940 at a cost of $9,000. It would cost far more at present prices for building. Doctor Stevens is located in a dairy district and his practice includes both large and small animals. It was planned to build a large animal unit later just behind the present hospital, but small animal practice increased so rapidly after the hospital was opened that additional wards for dogs had to be constructed and the large animal unit has not been built. The small animal work is now three times as great as it was prior to the opening of the hospital.

Constructing the hospital and residence as a single unit saved a considerable sum in the cost of the two structures and makes for convenience in operation. As shown in the floor plan the door on the right is the entrance to the residence and the door on the left is to the reception room of the hospital. The residence is completely walled off from the hospital. The connection between them being by way of an open porch in rear of the reception room, which connects the office and the kitchen. This separation avoids getting hospital odors into the residence and the connecting porch gives access from either building without exposure in inclement weather and without going up or down steps. A hot



water heating system avoids the interchange of air between the buildings that might occasionally occur were a hot air heating plant employed.

The structures are designed to have a rustic appearance which is in keeping with the natural surroundings. The entire exterior, roof and walls, except for the gable ends is finished in hand split cedar shakes. The gable ends are done in rounded knotty cedar. The interior finish of the residence is plaster downstairs and knotty cedar upstairs. All outside walls are insulated. The reception room of the hospital is finished in knotty cedar and the remainder of the building in white celotex with light grey trim. The floors of the hospital are of cement. The kennels are double deck of cement and galvanized iron with a drainage system in each which opens into the central drain in the middle of the room.

The cost of maintenance and operation of the hospital is extremely low. Electricity and light for both structures come through single meters which lowers the rates and there is but one heating plant to take care of. Doctor Stevens has had much enjoyment out of his hospital and it has been a business getter. If he were building it again the only changes he would make would be to single panel doors, built in lights in the surgery and eliminate cement floors from the reception room, laboratory, surgery and office. Cement floors are tiresome on the feet and legs and destructive to instruments and other equipment that is accidentally dropped.

A Hospital in Four Years*

Graduating and beginning practice from scratch in the depression year of 1931, Dr. H. E. Hansen, Ballston Spa, N. Y., contrived in a little more than four years to erect the small animal hospital shown in the illustration. Although lacking much from an artistic viewpoint, it embodies the practical facilities for a dog and cat hospital in a small town (pop. 5000).

The exterior is of plain concrete block construction, which will take a coat of white cement plaster.

The interior is finished smooth plaster over metal lath, the floors concrete, sloped to a center drain in the wards and operating room. Each ward is equipped with a porcelain sink, and there is a large cabinet sink with a drain board in the surgery.

The main ward contains 12 kennels in a double tier, the isolation ward six. They are constructed of wood with inside corners rounded; the fronts and

doors of steel bars. Newspapers are used for bedding. The wards are large enough for additional kennels when they are needed.

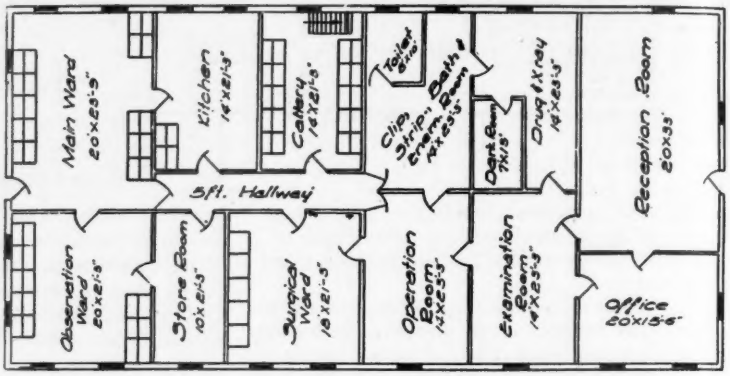
*Condensed and reprinted from *Vet. Med.* 31:5, p. 229.

Essentials of a Hospital for Small Animals*

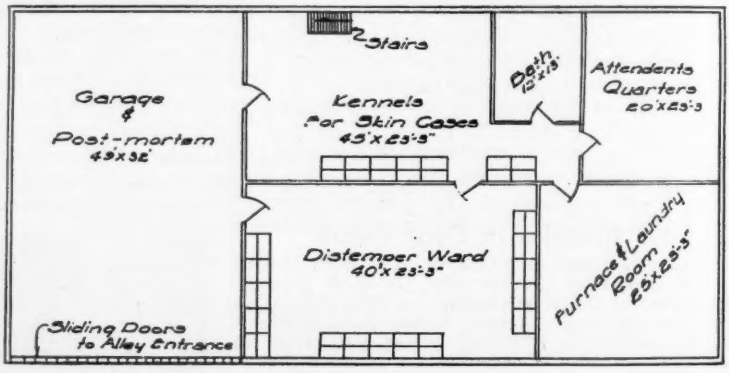
By P. H. Hand
San Francisco, Calif.

A SMALL animal hospital should have at least six wards—observation, surgical, cat, distemper, mange and main ward. Lacking any one of these wards, a small animal hospital lacks adequate facilities to give its cases proper attention. An office, a pharmacy, waiting room, examining room, surgical room, x-ray room, attendant's room, boiler room, enema and clipping room, store room, kitchen and garage are essential to a complete plan.

A small animal hospital should have no waste space; every square foot of its interior should be of use. To attain this, in the plan shown herewith, a short hallway leads from the surgery and enema room back to the main ward. The various other rooms have been allotted the space and location suited to their intended purpose, with the conservation of space always the main factor. A basement below the main floor includes the garage, attendants room, boiler and laundry room, and the mange and distemper wards. With the main floor and basement so arranged, a complete small animal hospital may be housed in a 50x100 foot structure.



MAIN FLOOR PLAN
Bldg. 50'x100' Outside



BASEMENT PLAN

A small animal hospital must be conveniently arranged to save as many steps as possible during a day's routine. In this plan the reception room is readily accessible from the front entrance and also from the office. The examining and operating rooms are located directly opposite the pharmacy, x-ray, clipping and enema rooms, making these rooms readily accessible to each other. The operating room opens into the surgical ward. The kitchen is centrally located to serve the main ward, observation ward, surgical ward and cat ward, and near the stairway to serve the basement wards. The store room is near the kitchen.

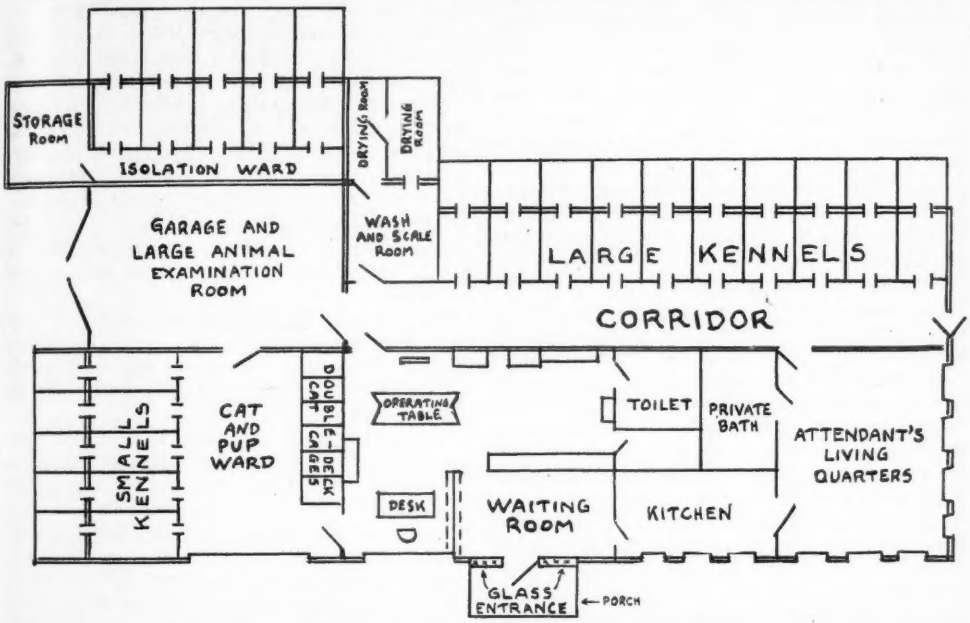
The workableness of this plan may be visualized by tracing with a pencil a small circle tour from the office through the reception room, pharmacy and x-ray room, clipping and enema room, operating room, examining room, back to the office. This group of rooms is so arranged that the busiest zone of the hospital is as conveniently accessible as if it were one large ward. A small hallway lessens the steps between the wards, kitchen, and store room, and opens with the main ward out into the exercise yards. A stairway to the mange ward and other installations in the basement is centrally located. The basement garage, readily

*Reprinted from *Vet. Med.*, 32:4, p. 188.

accessible from the alley, provides space for post-mortem examinations and a dipping vat.

In interviewing a number of men who have built small hospitals of their own, not one, seemingly, has been entirely satisfied with his building after it was completed. There always have been features that they would change if they were to rebuild. This plan is believed to eliminate most of the objections I have heard raised and to be workable. It may be altered to conform to individual needs or tastes.

Animal Shelter Converted to Veterinary Hospital



The waiting room is separated from the office desk by a showcase with a partition, in which there is a pay window, above it. The large room arrangement is far from ideal but must serve for the present. It contains the office desk, instrument cabinet, operating table, radiator, refrigerator, sterilizer, a bacteriology laboratory table, a sink and a chemical laboratory table. The large kennels, the kennels in cat and pup ward and in the isolation ward are all double, one-half inside containing a bed, drain and automatic watering device, and one-half outside. In the mild climate of Texarkana, the small outside runs or kennels are a desirable feature. The inside kennels and the outside runs are connected by trap doors operated by chains and pulleys. Small doors also open into the corridor from each kennel. The outside runs or kennels are separated by galvanized iron to a height of five feet and have heavy storm-proof wire netting above. There are no facilities for keeping large animals other than for a few hours in examining (and operating) room. The floors of all rooms and kennels are concrete. The walls are brick, the roof tile and supporting structures steel.

This structure was erected by the Texarkana, Texas-Arkansas Humane Association for an animal shelter. This work of the association was discontinued and the building was leased by Dr. George T. Dugan, who was just out of college, and remodeled to serve as a hospital for both large and small animals. Remodeling the building as shown in the floor plan required a great deal of careful planning and much hard work. The result, however, while not ideal is very satisfactory and of course the investment was much less than the cost of erecting a building for the purpose. It shows no little resourcefulness on the part of a young man without sufficient capital to build a place of his own, yet contrived to have an adequate place in which to practice.

Doctor Dugan's hospital is located in the center of a six-acre plot on a much traveled highway, one-half mile from the city limits and about two miles from the business center of Texarkana, a city of 30,000 population. Although the building is several hundred yards from the nearest residence and has tiled walls and sound absorbent ceilings, barking dogs is a topic of discussion in the neighborhood. This has convinced Doctor Dugan that he would not want to operate an animal hospital in a residential district.

The Modern Animal Hospital*

By L. R. PALMER,
Gainesville, Florida

A HOSPITAL is operated for the welfare of the patients and to give them the best of care the caretakers themselves must be provided for and their comfort assured. All this can be accomplished in a well planned building with a minimum of effort and expenditure where no waste space is used in corners or turns and articles to be used are arranged within easy reach with no overlapping of activities or passage routes.

Beginning with the front of the accompanying plan the route of the patient progresses from the reception room to the runs without as much as one overlapping step or the going through of a single room, nor is there any waste space. From the reception room the patient can be taken into the operating or examining room, or if that is not necessary it can be taken directly to the runs or to a kennel. This arrangement is not only convenient, time and effort saving but will often be found valuable in obviating encounters which might prove disastrous.

Between the reception room and the examining room, which in all probability will be used more than the operating room, the private office has been placed. Not that this is so very private as regards personal conferences which are seldom needed other than in the examining room, but it is for the private work which the veterinarian must do in connection with the records and accounts of his business. Having this room located where it is allows whoever is in attendance to keep in touch with both the reception room and the examining room without having to run around to do so. The hall not the office should be used as a passage way from one room to another. Therefore a desk is placed across one end of the room, the files across the other end with doors in the middle of the walls directly opposite each other. Whoever sits at the desk can see into either room or go into either room quickly. This is a great convenience. Cross ventilation through the doors and windows on the outside wall provides plenty of air and light. In winter, unless there is a furnace in the building, a grill through the wall into the hall will allow hot air to circulate into the room. There is plenty of wall space in all rooms for cabinets, windows, and large pieces of furniture. Floor space is ample for operating tables, chairs, cabinets, and plumbing.

It may seem an unnecessary expense to have both an operating room and an examining room but, in practice, quite the reverse is true. Aseptic conditions, which are necessary from a professional standpoint, are expected and demanded by the general public. An operating room which is used for examinations, hallway and storage room is not good practice or planning.

Convenient to both operating room and examining room and accessible from the hall are the dark room and the diagnostic laboratory. The laboratory can accomodate a microscope, slides, plates, petri dishes, inoculating and test tubes, incubator, urinalysis reagents, blood testing equipment and centrifuge.

Space has been left in the hall for a chimney. In the South, a radiating heater can be set here which, because of its central location, will heat the entire building and no basement is needed. An attic partially or completely finished gives storage space. In a cold and dry climate, where practical, a basement will be found the better arrangement for storage and a furnace.

At this end of the hall and under or over the stair-way a small rest room is located which is not only convenient but a necessity where clients bringing patients may clean up before leaving.

In the cat ward the room is no wider than necessary to take a door which is placed in the middle of the end wall and for kennels on either side along the long sides of the wall. If the building is not air conditioned a window directly opposite the door and above the cages will provide air and light for this ward. The same is true for the isolation ward, which has been placed on this side of the building. If, however, a ward apart from the hospital is desired for contagious cases, this ward and its accompanying run could be used for special patients—boarders or convalescents.

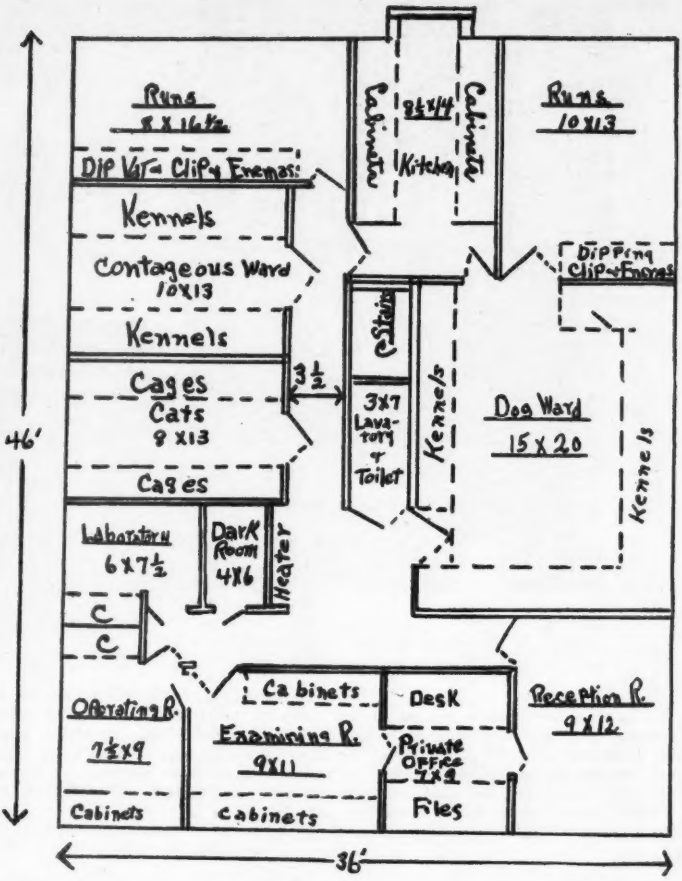
In the kitchen, the outside door has been placed in the middle of the wall space with cabinets arranged on either side. The doors leading to the large dog ward and to the hall to the other wards are conveniently placed. Stairs lead from the kitchen to the service drive.

The two outside runs could be built as porches or enclosed as a part of the building. The floors of the runs are of cement and the wall enclosure of such material that it can stand constant cleaning and *look* clean. Equipment for clipping, dipping, and enemas are stored in a suitable wall cabinet above the reach of dogs. The dipping vat and wash tub

*Reprined from *Vet. Med.*, 33:6, p. 268.

have well fitting covers which may be utilized as a work table when needed. In cold climates this equipment should be placed in the basement.

The best materials to be used will be governed by availability of supplies and climatic conditions. Bricks, hollow tile, stone or cement in its various forms, all have good appearance and are substantial. If the builder can afford it, air-conditioning is desirable. Cement or quarry tile floors and quarry tile baseboards should be installed in the beginning. If the kennels and cabinets are installed as a part of the building little floor space and wall space is left to be finished. Cement and quarry tile stand hard usage and clean well. The hardship of walking on such floors will be lessened by wearing rubber heels on shoes and placing rubber mats in front of work tables. Walls should be finished in washable paint and may be of hard plaster, cement, or tile if tile has been used in the dividing partitions. Cracks should not be left behind cabinets or kennels. Wood is undesirable material for a veterinary hospital. It absorbs odors and liquids, leaving a permanent odor clinging about the building unless the wood surfaces are kept constantly painted with impervious paint. Cement or tile structures also will need painting but not as often nor as heavily as wood.



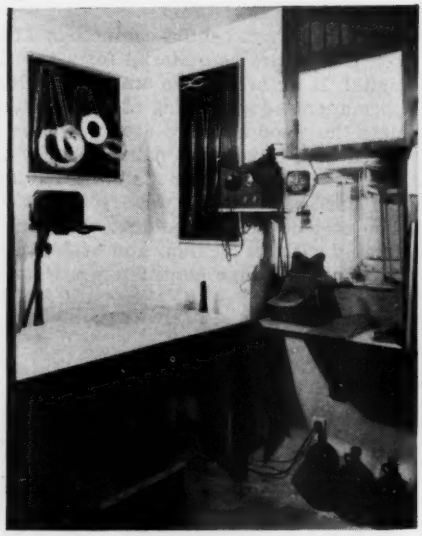
The cost of such a building will vary considerably with its location and with local prevailing prices. Some contractors estimate the cost roughly on the number of cubic feet in the building, others on the square feet in the floor plan then, after the details have been worked out, make a complete estimate. In this plan there are 12 rooms, bath room, hall and stairs. The floor plan contains 1656 square feet. The cubic feet would depend on the height of the ceiling. If the building is air-conditioned the ceiling may be lowered considerably over present standard heights.

DR. ALAN BACHRACH'S HOSPITAL IN PHILADELPHIA

The small white marble square at the sidewalk level is a dog bar, recessed into the wall of the hospital and containing a marble trough six inches deep and a removable standpipe and is supplied with running water. Dr. Bachrach was the originator of the dog bar which has become quite popular. The following six illustrations are interior views of the hospital. In addition to facilities shown, the hospital contains a large waiting room elegantly appointed, an admission room, a surgery with instrument cabinets recessed into the walls, a cat ward, a large kennel ward, a "sartorium," a solarium, store room, etc. These views are of an elaborate hospital, luxuriously equipped in a large city. Such an establishment is justified by a well-established practice and a wealthy clientele

PRIVATE OFFICE OF DOCTOR BACHRACH

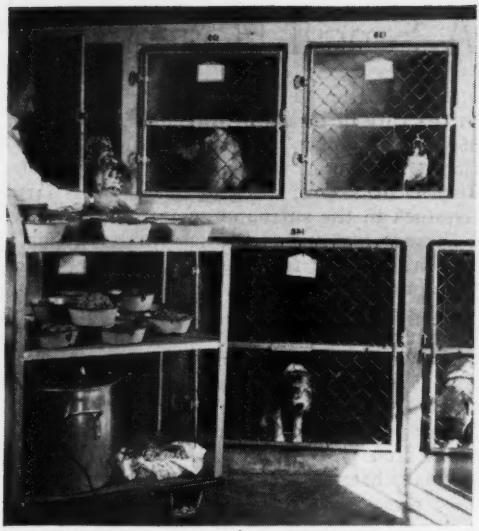
Entrance is from the waiting room. The door shown on the right leads to a private laboratory. Files, case histories, accounts, etc., are kept in the general office which may be entered from the waiting room



X-RAY ROOM

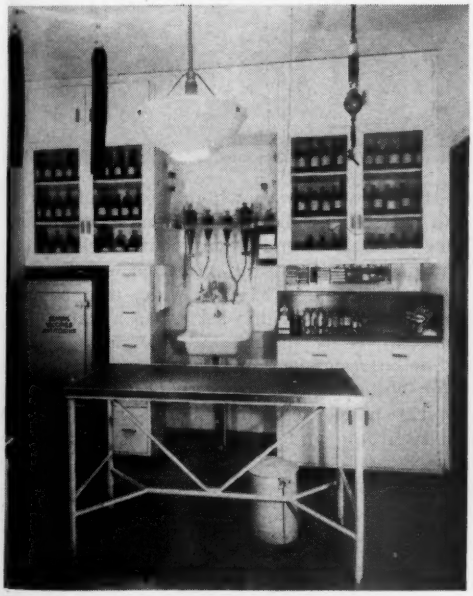
PHARMACY

As seen from the waiting room, through a circular plate glass in the wall in the right



SMALL KENNELS

The kennels are made of magnesium chloride troweled on wire lath. Each kennel has a trapped drain leading to the sewer. The kennel floors are elevated at the front and slope to the drain at the rear. The three-decker food cart (at left) is a time and labor saver. There is one for each ward



CONSULTATION ROOM

As seen from the door of the waiting room. The examination table is covered with battleship linoleum

RUNWAYS

The walls between the runways are smooth-finished cement on wire lath, easy to keep clean and economical of space. The runs slope to the front and hot and cold water is available at all times

A Small Hospital in a Small Town Pays

The Erickson Veterinary Hospital is located in the City of Charlotte, Michigan, a town of 5500 population in a predominantly rural section. Our practice is a general practice; probably 65 or 75% of our work being with farm livestock in the surrounding farming country.

We are just inside the city limits, about a mile and a half from the business section of town, on a state and federal highway which carries a great amount of traffic constantly. This highway location we feel is quite important. We were located downtown for 18 years and were told when moving was being considered that our patrons would not come out to our present location, but that did not prove to be true.

I have been interested in veterinary housing ever since I was in school, near 30 years ago, and long ago came to the conclusion that the average veterinarian is very poorly housed, and usually is a terrible housekeeper.

Mrs. Erickson and I have visited many places in Michigan and surrounding states, where a veterinary practice is conducted. It goes without saying that they are nearly all disappointing; they are poorly located, the buildings are not attractive; their housekeeping is usually very bad, and they are, a large percentage of them, a smelly mess.

There isn't any good reason why a veterinarian, who spends four or five years and considerable money in becoming trained to carry on a very specialized line of work, should surround himself with such poor housing.

Of course some of this poor housing is from economic necessity, especially with some of the younger men who lack the required funds for better buildings and equipment. On the other hand, there are veterinarians who have reached a point, as far as finances are concerned, where it is possible for them to better themselves in this matter, but who still continue to do business from surroundings that are not a credit to a profession of any kind.

If through some construction magic or genius, veterinarians would become conscious of the fact that there is a definite need for housing themselves better, and keeping their houses better, it would enhance the standing of the veterinary profession as a whole, within a very short time.

This is one of the very few animal hospitals in Michigan built for that specific purpose.

Every thought in the selection of the location, the design and arrangement of the building, had the object in view of making it a satisfactory place from which to carry on the general practice of veterinary medicine.

I feel that these buildings for the practice of veterinary medicine should be located somewhat away from other buildings; they should be conspicuous and attractive in appearance, surrounded by spacious, well-kept lawns, and far enough from the highway to give easy visibility from the highway of the whole plant. Lawns, if well kept, add much to the attractiveness of a building.

Our building is constructed of cinder blocks, painted white, with plain blue awnings, red brick window sills, with a wide circular drive in from the highway, which is easy of ingress and egress. The driveway is long enough and wide enough so many cars can park at the same time, without interference.

The building is 32 feet wide, and 52 feet long, with an L which serves as a garage, or box stall, 14 by 21 feet.

The entrance vestibulte leads into a waiting room which is large enough to accommodate several people comfortably. It is furnished with chrome and leather, modernistic furniture.

At the right of the waiting room as one enters the building, is an office 10 by 11 feet, the connecting door being in two parts, the lower part having a 12-inch shelf at the top for use as a writing surface, etc.

From the waiting room, opposite the entrance door, a hallway six feet wide extends through the center of the building from front

to back, which we think is very important, in giving the appearance of spaciousness. Narrow hallways and narrow doors are definitely out, where good appearance is a desideratum.

On the right of this hallway, immediately back of the office, is an examination room, which may be entered from the hallway, from the office, or from the outside. We consider this outside entrance to this room of great convenience, as in bringing patients in to the hospital, they can be brought directly into this room without disturbing those who may be in the waiting room or other parts of the hospital.

Immediately back of this examination room on the same side of the hallway is a small room used for a museum, containing a collection of 150 photographs of diseased animals, taken in this practice and about 100 pathological or teratological specimens, all also collected in this practice.

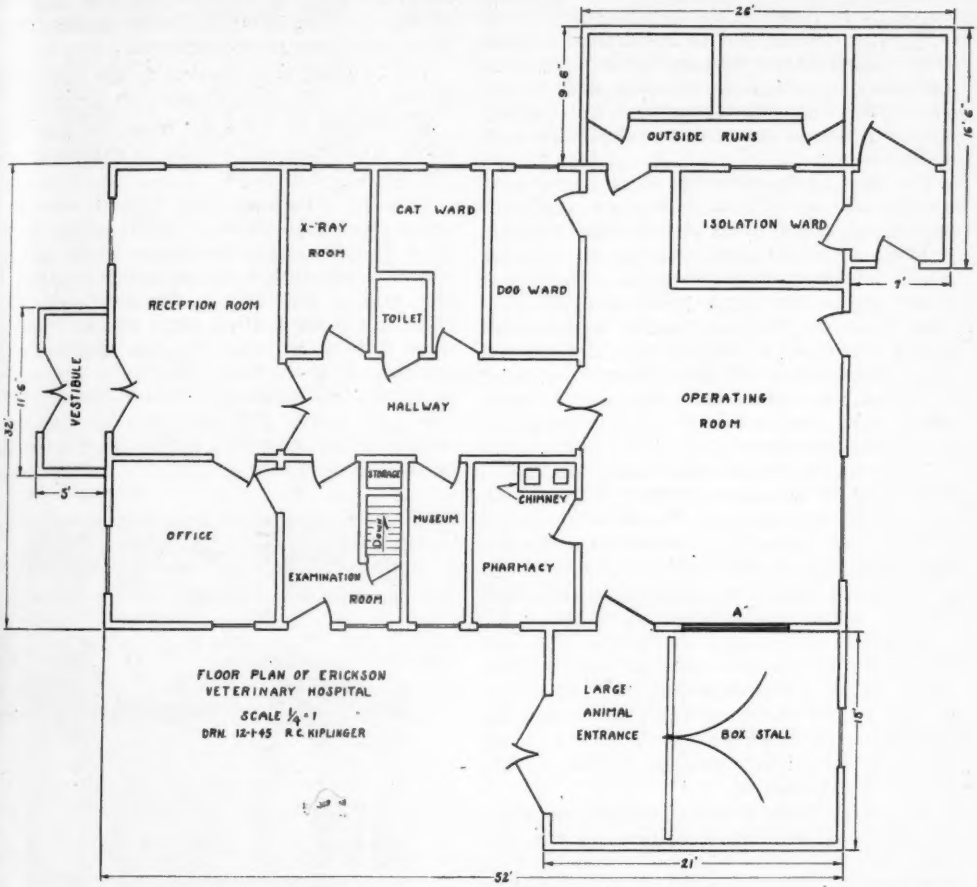
On the left of this hallway, just back of the waiting room and across from the examination room, is an X-ray and fluoroscopic room.

The next room back is a toilet room, and back of that the cat ward, which contains cages accommodating five animals. Placing cats in the same ward with dogs is not, in my opinion, a good practice.

Double doors at the end of the hall give entrance to a large room which contains operating tables, both equine and canine, instrument stands, and the necessary equipment for general veterinary surgery.

Off from this large room we have a small drug room, where we can sterilize instruments and dressings, prepare feed, make urine analyses, blood tests, etc.

From this large room there is also an entrance to the dog ward, which is so located that the dogs can be let out, conveniently, into an outside run with the least amount of handling. It might also be mentioned, in connection with these runs, that they are surrounded by a concrete wall four feet high,



with wire fencing above. We feel that this wall is especially important, because dogs, particularly strays, cannot contact through the runway fence as would be possible without the wall.

In the corner of the building, taken out of this large work room referred to, but unconnected with it, is an isolation ward, which has no entrance from inside the building.

We much prefer not to hospitalize animals with communicable diseases, but feel that it is necessary to have some isolated place to put an animal when emergency arises or for any reason it seems desirable to hospitalize such patients.

The part of the building which serves as a garage, also serves as an entrance to this large work room, and as a box stall for large animals.

There are two large wood gates, or doors which reach only part way to the ceiling, which divide this garage room into two separate spaces, so the front portion may be used for an entrance to the operating room, and the back part as a box stall. When these gates, or doors, are swung back against the wall, entire room may be used to house a truck, car or trailer if desired.

There is a small basement under the building, 14 by 32 feet, with windows at each end. This basement contains the heating plant, fuel storage, screen and storm door storage, shower bath, and dog bath.

All inside walls are plastered, smooth, and painted a dull ivory—no sheen at all.

All woodwork is walnut finish, also dull, with no sheen. The doors are birch with natural grain finish. All are wide, at least 36 inches, perfectly flat, no panels. The door casings are narrow, about one and one-half inches wide. We think that, in appearance, this inside finish is very attractive.

The floors, back to the operating room, are double wood, with moisture-proofing material between, and inlaid linoleum covering. They are kept as clean as possible and waxed at regular intervals. The floors, in the remainder of the building, are of concrete, smooth and painted.

The heating plant is a hot water system, stoker fed. Sixteen radiators of ample capacity insure easy heating of every part of the building, including the garage or box stall.

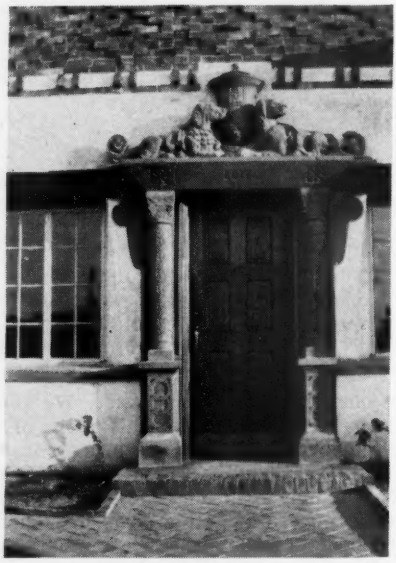
In the wall dividing the box stall from the operating room there are two horizontal doors, hinged at the bottom. One opens toward the operating room, and contacts the back edge of the operating table, and the door on the opposite side of the wall opens toward the box stall, and when lowered its edge rests on the bedding in the stall, the whole providing a slide, and opening through the wall through which a horse or other large animal can be moved from the operating table onto the bedding while still anesthetized.

The chimney is large, with a double flue, one side for the heating plant, and the other for ventilation, which is accomplished by registers and ducts from the dog and cat wards, the drug room, and other places where odors are likely to be prevalent.

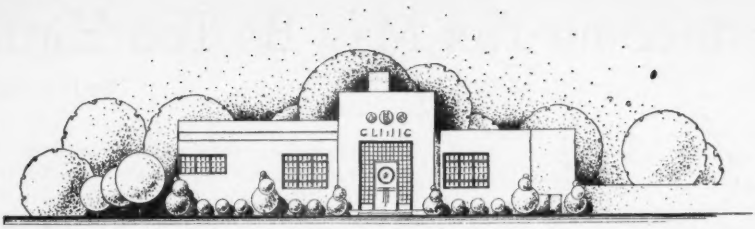
The building is connected to the city water mains and with natural gas and electricity.

In addition to the toilet room, we have five other lavatories and outlets in various rooms for hot and hold waer.

This is a little hospital in a small town in a section well supplied with veterinarians. Within a 25-mile radius there are many practitioners, including a considerable number in the capital city and in Battle Creek. The Michigan State College clinic is less than an hour distant by truck, yet the practice that comes to us keeps four people quite busy—Mrs. Erickson, Mrs. Little, Dr. Paul T. Miller (MSC '44), and myself GR RAP '18). We find very little time to sit around, if we take care of the work that is always waiting to be done.



This attractive entrance, designed by Doctor Schreck several years ago for one of his hospitals, intangibly influences the public's opinion of how the veterinarian evaluates his institution. It also helps a large share of the public to fix the identity of the doorway in mind—to remember the place. A doorway such as this is as appropriate as the pharmacists mortar and pestle or the minaret on a Turkish mosque. It constitutes a sort of veterinary trademark



The major difficulty that confronts the new graduate in veterinary medicine, who desires to enter practice, is that of providing a suitable facility from which to conduct his practice. This problem is far more difficult than finding a community in which to practice.

The average young veterinary graduate like the average young business man needs credit for the very considerable investment that suitable building and equipment for conducting a practice of his own entails. But he is handicapped, as the business man is not, because credit agencies are unaware of the credit value of a veterinary practice. If one seeks a loan to establish a gasoline filling station, a delicatessen, a drug store, a florist shop or a machine shop he finds all loan agencies supplied with elaborate tables and statistics showing the mortality in such businesses, i.e., the credit risks involved in loaning to them. These tables are classified to show the varying prospects of the business in all sorts of locations—street intersections, middle of block, business section, residence section, on street car lines, on through streets; and in villages, towns and cities. Having this information and experience of its own the loan agency is in a position to make an immediate investigation and to act upon the application promptly.

When a young veterinarian goes to the same loan agency and applies for a loan to build or buy a place from which to conduct his practice and perhaps to hospitalize a few animals or simply for an office waiting room, adequate surgery, a laboratory table and supplies, he is asking credit for an unknown. The loan agency has no information on the success or failure of such ventures. No data as to the income that is to be expected. It knows the average sales and net income for say a florist shop in a residence district of a town of 5,754 population and six cemeteries, but what income may be expected from a veterinary practice in a community of any type is as unknown as what to do with an atomic bomb. Result: the loan is declined and the veterinarian advised to practice from his vest pocket a few years and show what he can do; then if his reputation and prospects justify it the loan will be made.

A veterinarian, connected with one of the schools, who has watched this matter for a number of years states that, on the average, veterinarians start practice with inadequate and unsuitable facilities, which are no credit to themselves or to the veterinary profession and which handicap them greatly in a new location. Again speaking of averages it is seven to ten years before the new graduate is able to provide himself with a suitable building and adequate equipment in a desirable location. Further, he will have been in practice 14 to 16 years before he has his property paid for. Only then, when his professional career is half over, can he expect to start to provide for a competence for old age. It is his observation that, where the young graduate is adequately financed in the beginning, this period of struggle is reduced to seven years. To put it another way seven years of the average veterinarian's professional life are largely wasted from a financial viewpoint, to the disadvantage of the community in which he practices and waste of a goodly portion of the cost of his education which was borne by the state.

Because the prestige of veterinary medicine and the unity of the veterinary profession is involved, organized veterinary medicine should concern itself with this situation. The problem of financing the beginner is not impossible of solution. First it is necessary to collect accurate information on the credit risk involved. This has been done for creameries and slaughter houses, for night clubs and rabbit raising, it can be done for veterinary practice. When this has been done, a coöperative credit arrangement between the practitioner and the state or national veterinary association or preferably with both will render such loans as acceptable to loan agencies as any other. In fact more desirable than any type of individual loans. There are thousands of coöperatives in scores of lines of endeavor. Their average record is good. Have veterinary organizations less confidence in their members than a creamery coöperative, or less interest in their individual welfare than a grape growers association, or less interest in improving its average of service than a marketing association?

Your Income Tax May Be Too High?

By HAROLD J. ASHE
Tax Counselor

WHERE the taxpayer fails to claim a deduction or expense item the Treasury Department will not assume to correct the income tax return, no matter how obvious it may be that such an oversight on the taxpayer's part has occurred. Only eternal vigilance will result in filing a return in which the taxpayer is on an equitable footing with others. Sharply graduated taxes now penalize such oversights by $23.00 on each $100 in the lowest taxable bracket, quickly rising to a tax of $37 on $100 in the $10,000 bracket and, in the $25,000 class, it is $62 on $100.

"I've got $500 in the bank, too," reported a taxpayer to me as an afterthought. "I suppose I've got to pay over a hundred dollars tax on that, also."

As diplomatically as possible I assured him that such a bank deposit is an asset and as such not taxable; that only income derived from it is taxable.

Now such a quaint conception of the income tax law may seem amusing, but it has come to my attention that treating of assets as income is not as uncommon as it may seem. Tens of thousands of taxpayers are paying income taxes on their assets in a left-handed manner and out in the forefront are busy veterinarians who can't be bothered with book details around March 15. They pay an income tax on real profits, as well as on apparent profits which, actually, are depreciating assets. It is this unrecognized depreciation of such assets that frequently gives the taxpayer the deceptive illusion of larger annual profits than in fact he enjoys.

This sounds very involved, but it is really quite simple. Analysis of annual earnings is usually confined—from years of habit in a non-tax era—to determining net profit by deducting book expense from receipts. Here, of course, the taxpayer is failing to reckon with all of the costs of doing business in arriving at his net profit figure. I was amazed in making out 1944 returns at the number of taxpayers who brought in to me incomplete statements of their business expenses. Practically none of them were prepared to take all of the legitimate expense deductions to which they were rightfully entitled and which, in fact, they had sustained.

Many business and professional men have filed 1945 estimates based on their 1944 earnings. Even if 1945 gross income and operating expenses compare favorably with 1944, if these taxpayers have erred in not taking all expense items into consideration in 1944, it follows that they will not only have paid too high a tax on 1944 income, but they will repeat the error again in March, 1946, on 1945 income in making final returns. However, it is not yet too late to correct this estimating mistake, in preparing final returns which may result in a lower final payment or, in many cases, a refund.

Ignoring wages, materials and supplies and other orthodox expenses which it is assumed are deducted from gross income to arrive at a net figure, what are the items of expense overlooked either partly or entirely by the average small taxpayer—and some big ones, too?

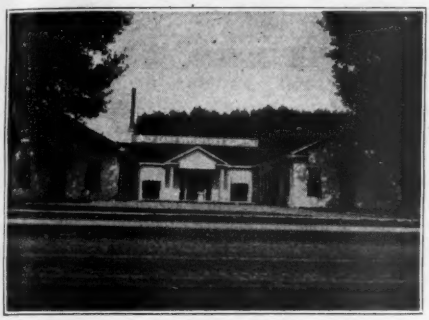
Speaking now from actual experience as a tax counselor helping business and professional men through the intricacies of the 1944 income tax return, I observed that at least 50% were unprepared to take into account at least one of the following and many ignored all. (1) Depreciation on office and other fixtures; (2) depreciation on motor equipment; (3) depreciation on private cars used partly or entirely in business and, (4) depreciation of equipment. I shall enumerate other items later.

The items already referred to represent capital assets being liquidated through usage in producing gross income without which no gross income or net income would be possible. The cost, through depreciation, of these items is as much a cost of producing income as are labor, supplies and the thousand and one petty items that are usually carefully recorded.

The explanation usually is found in the fact that these items rarely show as a business expense because they do not appear in the year's books as an expenditure, having been acquired in previous years. Actually, if a car used in practice was purchased, say in 1941 for $800 and has a life expectancy of five years, then it follows that this equipment (in initial outlay alone) is costing the taxpayer $160 annually as surely as though an item for that amount showed as an outlay for the tax year reported.

Again, many veterinarians operate their practices from their homes. A dual purpose property (home and office) serves to confuse them as to which is practice and which is residence. Having their office where they are domiciled such taxpayers are likely to think of such an establishment as a purely personal

arrangement. Until advent of high income taxes there was no need of segregating costs of office from those of home. Moreover, many such taxpayers have long since arrived at the pleasant conclusion that, because the entire premises represent an outlay equivalent to that for a home alone they, in effect, are getting free rent for the business. Now such thinking becomes more than a harmless bookkeeping deception. Such a belief results in sharply higher income taxes. Actually, the Treasury Department has long recognized that part of



When building comprises home and hospital the owner should report the proportion used by each. Maintenance and depreciation costs should be divided accordingly

such an establishment is a business expense and may be so considered in making an income tax return.

If the property is rented, the practice may be charged with a *pro rata* share of the rent, utilities and other divisible expenses. This may be as little as 25%, or as much as 75%, depending upon the division of improvements as between home and the practice.

Likewise, where the taxpayer owns the property and uses it in large part for what the Treasury Department calls business purposes, he frequently fails to charge the business with any of the expense. Here are just a few of the items that he is undertaking to bear, himself, instead of entering them as an expense of conducting his practice, in order to determine his true, net income: (1) annual maintenance cost; (2) depreciation of property; (3) utilities; (4) insurance. Interest on mortgages and real estate taxes are deductible as a personal item in any event.

Moreover, as a sole owner, the taxpayer is apt to bear the cost of business entertainment out of his personal pocket on the unsound theory that whether it is charged to the business or not does not materially affect him. Even taxpayers having modest incomes not infrequently may spend several hundred dollars a year in small sums at a time in entertaining their more favored clients and making a favorable acquaintance with prospective ones. This may involve lunches, liquid refreshments, cigars or any other outlay of a similar character, including entertainment in the home for business reasons. It is recognized by the Treasury Department as a deductible item of business expense.

To illustrate the importance of a careful scrutiny of these expenses as they bear upon the real cost of doing business, let us take the case of a typical taxpayer.

Let us assume that he owns his own dual purpose property which, exclusive of land value was worth $9,000 at time of acquisition. This is a two-story structure, with offices and hospital downstairs and living quarters upstairs. In addition there are boarding kennels in the rear of the property, together with garages. A fair division would show that two-thirds of the improvements are used for business and one-third is personal.

This taxpayer has a dog ambulance acquired in 1941 for $1500; a passenger car purchased in 1941 cost him $900 and he uses this car three-fourths for business and one-fourth for personal convenience. Hospital and kennel equipment represents an initial outlay three years ago of $2500 and office furniture and fixtures cost him $500.

During 1945 he paid a $60 insurance premium on the buildings. Repairs to the buildings (all necessary maintenance as distinguished from capital improvements) cost him $450.

In addition he finds that he has spent $210 during the year in entertaining preferred customers.

Now this taxpayer, ignoring the cost-of-doing-business items enumerated, finds that he has a net income of $5000 in 1945. He has deductions for charitable contributions, property taxes, medical expenses, etc., of $250. Besides his wife, he has three dependent children. His net income subject to normal tax is $4,250 and income subject to surtax is $2250. His normal and surtax is $582.50 and, for all the author knows to the contrary, such a hypothetical taxpayer could feel pretty good about it. After all, according to his figures, the Government has left him with over $4,400 after paying taxes—or so he thinks.

If, however, he had taken full advantage of depreciation and other legitimate business expenses he would have found that his seemingly handsome income of $5,000 was, in reality, only $3,375. Like a hibernating bear, the other $1625 was his own fat that he had been living on and, more important, paying tax on, to boot! So, viewed in this light, after paying $582.50

income tax he would have a real net after taxes of $2,792.50 instead of $4,400!

Here, if he really wants to get a true picture of his net income, are some of the additional business expenses he would report in his income tax return. These are the items which, if not reported, boost his net income and result in his paying a tax on capital assets and on hidden current expenses.

20% depreciation on ambulance	$300.00
¾ths of 20% on his passenger car ($180)	135.00
⅔rds of 4% depreciation on his buildings ($360)	240.00
⅔rds of the insurance premium ($60)	40.00
⅔rds building maintenance ($450)	300.00
½ of the utilities on one meter ($200)	100.00
10% depreciation on equipment	250.00
10% depreciation on office fixtures	50.00
Business entertainment	210.00
Total	$1,625.00

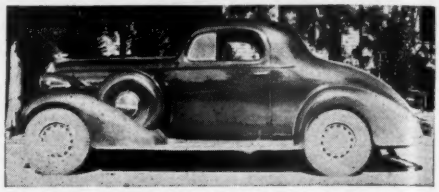
Now let us look at this taxpayer's revised income tax return. His income subject to the normal tax has been reduced from $4,250 to $2,625 and income subject to surtax has dropped from $2,250 to $625.

His income tax now figures $203.75 instead of $582.50, or a saving of $378.75 because his real net income has been demonstrably decreased by $1,625. Instead of having the illusion of a $5,000 income calling for $582.50 income tax he now has a *real* income—and he had only that income anyway—of $3,375 subject to a tax of $203.75, leaving him with a net of around $3,175, but still better than the $2,792.50 income, after his taxes had been paid on a $5,000 income through failure to compute all costs of doing business.

Certain warnings must be sounded, however. Figures in the above table of additional business expenses are only for explanatory purposes. Depreciation of certain equipment may be at a rate of 5% or 20% a year, depending upon its nature. A passenger car may be used only 25% for business or as much as 90 or 100%. Use of one-half of the buildings would not necessarily justify 50% deduction for utilities, and on the other hand business use of utilities might be greater than home use. These are matters for the individual taxpayer to determine in the light of the facts applicable to his particular business set-up and experience.

In passing it should be noted that, that part of the items enumerated traceable to personal or home use may not be deducted. It is because of this disallowance that a division of these expenditures is called for by the Treasury Department.

Also, failure to take any of these items in past income tax returns does not make it permissible to include past overlooked items in a current return, i.e.: two years' depreciation on an ambulance, for instance, in one's 1945 return because one failed to show it in the 1944 return would be disallowed.



A car used for business and pleasure should be reported for each in the proportion for which it is used for each

A check list of other deductible business expenses apt to be overlooked in preparing income tax returns include:

Membership fees in professional and business associations, including the chamber of commerce.

Expense of attending professional conventions including travel, hotel and meal.

Bad debts, only if so determined and written off in the year deducted.

Losses from theft, either cash or property, either business or personal, but only to extent not covered by insurance.

Losses from fire, storm, earthquake, hurricane, flood, damages caused by automobile accidents, but only to extent not covered by insurance.

Subscriptions to professional magazines and cost of professional books.

Cost of defense against malpractice suit (but only if suit is successfully defended).

* * * *

School of Public Health in Brazil

The Institute of Hygiene of the University of São Paulo, where a postgraduate course in public health and hygiene was given for several years, has now been transformed into a School of Public Health and Hygiene under the direction of Dr. Paula Souza, who holds a diploma of doctor in public health from the Johns Hopkins University. Wancolle, Lucas Assumpção and Arthur A. Whitaker are professors at the new school. Dr. Paula Souza, still absent in the United States, served as a member of the delegation of Brazil at the world security conference of San Francisco.—*J. Am. Med. Assn.*

The Veterinarian of World War II*

L. A. MERILLAT**
Chicago, Ill.

NOTHING could better demonstrate the strong arm of veterinary medicine than its diversified work in a modern war. The Army of the United States, mechanized as it is, still provides for a veterinary corps of greater strength than ever before. Approximately one-half the veterinary profession's manpower of military age is in uniform at this moment, although in World War II fewer than 50,000 animals were used in all of our far-flung military operation. By way of contrast in the major operation of World War I—Meuse-Argonne—the American First Army alone, used nearly 100,000 horses and mules on but a 65-mile front, or twice as many in a single operation as were used in all of World War II. In these two world wars, the number of veterinary officers were about the same, meaning that an enlarged scope of military veterinary medicine in this country accounts for the difference. The armies of Russia and Germany used more horses, mules and dogs in their shorter and fewer fronts. But, in our military setup, the medical care of sick and injured animals is but one of the sundry duties of the Army Veterinary Corps. As in civilian life, veterinary service has been aggrandized (1) by indulging in scientific research, (2) by operating in highly diversified climates from arctic to tropical, (3) by watching over animal health, dairies and abattoirs in widely scattered zones at home and abroad, (4) by collaborating with domestic and foreign livestock sanitary officials, and (5) by certifying as to the fitness of food all the way from source to destination under various conditions of exposure to extreme temperature, humidity, and contamination of food stuffs at processing plants, in storage, on railways and ships, in trucks, carts and *appareils*, and at the dumps of the battlefields. In terms of tonnage, the magnitude of this line of duty runs into figures remaining to be compiled. A train of freight cars stretching from Hollywood to Broadway wouldn't hold the food the Veterinary Corps inspected during the recent conflict. The exact poundage must be left for the historian to disclose. Strangely, the ultimate effect this far-reaching service will have on the future of the veterinary profession is not predictable. The question "Just what did you do?" can be answered only categorically after a considerable length of time.

There is an old saying that the only true history is that set down on the spot by a witness of the event. But that is erroneous because narrative ought to be interjected with clever opinion and conclusion to have maximum value, and that can't be done on the spot. A war correspondent at the surrender of Lord Cornwallis could not have predicted that the most powerful nation of this civilization was being born before his eyes, nor could anyone have written knowingly about Gettysburg in July, 1863. One should, therefore, make only preliminary predictions about the effect the war will have on our professional future in world's work. Though the stage seems to be set for a brilliant future, there are signs that the opposite would be the better prophecy. The fine record the Army Veterinary Corps has made in the field of food hygiene and that you have made in food production has already started a movement to launch an entirely new profession under the name of "food technology" that forecasts an evil trend. Our 55-year-old meat-inspection service, for one example, has been changed from scientific to economic command, concurrently with the appearance of widely published articles advocating the immediate founding of this new profession. That is, you are to be kicked out of a branch of veterinary medicine you started more than 50 years ago and in which you have developed a high and honorable level of service. The new project has ambitious proponents in high places who at this moment are groping around for program and personnel. The only unsettled question that I can detect among them is, whether its direction should go to *food technologists* or to *food engineers*. Both of these somewhat ill-defined groups, without established schools or stated curricula on food inspection, want to furnish the manpower with college-trained men in the higher brackets. Everything is set for the rank and file. There are over 3,000 lay inspectors in the federal meat-inspection service and a countless number of shifting, politically appointed laymen serving municipalities and states as meat, dairy, hotel and restaurant inspectors for a start. The new profession will not lack available members. All there is to do is hold a convention, adopt a constitution, elect officers, collect fees, and there you have a profession with an undeveloped field to exploit, a membership waiting to join and men with college degrees to command. In the plans I have read, the veterinary profession with its established educational system, unequaled anywhere in the world, and with a

*An address at the Annual Banquet at the 32nd Annual Meeting of the Eastern Iowa Veterinary Association, Oct. 9 and 10, 1945.

**Editor-in-chief, American Veterinary Medical Association.

head start of 55 years in the field of food inspection is not even mentioned as a source of its manpower, notwithstanding that we already have the perfect set up to furnish the American people with a food-inspection service of the highest order—sound, coöperative, efficient. None other is needed. With graduate courses or the graduate training every learned profession needs for qualifying in specialized work, our system of education is the natural place to do the basic training. The Veterinary Corps seems to have lifted food hygiene into the limelight and created an opening for this non-veterinary grouping. For a profession not universally understood, we seem to have done our work too well. We have paved the way for an expansion that we are not prepared to fill. The counter attack is to hold the line and fight on. Wonder if you'll heed the warning. The AVMA is publicizing, and backing the idea of expanding veterinary medicine deeper into the field of food hygiene. Or are you too busy to think about such matters? To get a touchdown Knute Rockne used to bawl 'em out between halves. Well here it comes. "You asked for it." Just the pessimism of old age, you'll say. The belief that the old folks grow pessimistic is an ingrained disease of the younger set. But the old folks have a ready-made reply. They retort that the young folks are too dumb to understand what the old folks say. Nietsche in some of his so-called wisdom said that the next best thing to not being born at all is to die young. Being up in years, I don't agree with that, of course, but I do believe that a lot of people were out of town when brains were passed out. This may seem far afield from the title of this speech, but it isn't. Let me explain. The veterinarian of World War II includes you who stayed at home to conserve food for the men in military raiment. Like the boys in uniform, you did the job well. You helped to produce an unprecedented tonnage despite manpower shortage and you outflanked the animal plagues despite their ambuscades. But, don't pound your chest and brag. The pattern for livestock sanitary work was given into your hands by the old folks and its use through the years has been marked by a succession of famous discoveries and achievements which actually gave the warring world a food supply of unequaled magnitude and the other war materiél needed to bring the most atrocious tyrants of all time to disgrace and defeat. The researches in veterinary medicine in the making of the United States is comparable to the great inventions. This being incontrovertible in our way of thinking, why should there exist a movement to snatch from your

Army veterinarians had experience with animal diseases in every climate. Hundreds of thousands of food animals were purchased in all parts of the world for our troops. Veterinary officers examined animals before purchase to exclude foot-and-mouth disease, rinderpest, surra, piroplasmosis, contagious pleuro-pneumonia and various other exotic plagues, tuberculosis and anthrax, in addition to all the ailments common in this country. The illustration shows examination of Zebu cattle in India

hands, work that you have done so well and so long? Why should there be a vast system of quackery for profit within our own commercial realm and in our governmental departments? Let me tell you why. We've been dumb. Perhaps, we were on a call when brains were passed out. I hear so much about being too busy to give a helping hand or even a thought to expanding the usefulness of our profession! Veterinarians never developed the passion to work in concert as their first duty to their occupation—the job with which you are entrusted and the one from which you earn a livelihood. My dear fellows, in a lifetime of continuous effort to organize veterinary medicine in this country, in the face of small numbers and big things to do, you may not be aware that the most frequent question asked was "What good is the association?" For years it was necessary to coin a set of arguments to *coax* men into the associations bent on building up their occupation! I overheard that question asked in the dining room of this hotel two years ago and I have such a letter on my desk now. So it is still being asked. We used to resort to the old saw about the educational and social advantages and all that stuff and, to sell the idea, we even stooped to explain how that might fill the pocketbook. Personally, I have long since quit that kind of salesmanship and adopted a new "technique." I simply say "You poor fish, what's the use to answer that question, you are too stupid to understand anyhow." And, I meant that literally, for if the members of a small profession like ours, with such a tremendous job to do for the welfare of the country and its people, do not understand the need of united effort, let them sleep in their own bed and watch their occupation be spattered by commercialism and parliamentary imbecility, that is to say, by some of our own commercial firms and public agencies. What I am trying to say is, that the veterinarian of World War II, civilian and military, has drawn a clear picture of the responsibilities entrusted to our small profession and still we remain too blind, or are too busy, to see, that only the strongest united effort can prevent it from being shattered to impotent pieces though lack of a planned defense, meaning lack of organized strategy. I have seen locked stable doors and court injunctions against efforts to exterminate contagious pleuropneumonia of cattle in my own town and state; the blowing up of dipping vats, built to kill off cattle ticks; pitchfork brigades determined to prevent the eradication of bovine tuberculosis. Both you and I have seen great farmer organizations seeding the whole Middlewest with animal contagions; the stopping of local milk and meat hygiene and now we are watching the forming of a new profession of food technology, all because impressing upon the public consciousness the motives of veterinary medicine has been too long postponed. But the most regrettable thing of all was having to answer the question "What good is the association?" That's why I am saying here without reservation that veterinarians have not only been stupid but guilty of neglect of duty. Busy with their daily tasks, they failed to take a birdseye view of the big picture. They did not see the wisdom of supporting the organizations which would paint the big picture for them and their public. I am, however, obligated to add that the younger crowd graduated by the veterinary colleges now are more resourceful. They join the local, state and national organization as a primal duty, and therefore, are paving the way for a more complete execution of their task. My arguments may seem contradictory, for I am glorifying the old folks on the one hand and condemning them on the other. The point is simply this, the old folks leave behind evidence of both their errors and their achievements, for the guidance of the younger set, and therein lies the value of advice of the older set. There are achievements to seize and pitfalls to avoid which only strong organization, faithfully conducted, can keep alive. In the practical sense, it all adds up to developing a veritable mania for donating a bigger share of one's income toward maintaining the integrity of one's profession, shall we say, like the labor unions do. Science working in the seclusion of its laboratories, under an imaginary halo, dissents to its peril, for science, not advertised and not used for the benefit of mankind, is a waste of effort. Science that does not come out into the open and tell the people what it is doing, and why, is pretty much like the old physician or veterinarian who kept his recipes locked in the safe. The success of the veterinary service of World War II is an example of good advertising and good organizing. When a group of us met with the medical and dental professions along with General Hershey of the Procurement and Assignment Service at the offices of the American Medical Association in Chicago at the beginning of the war, there was formed a nation-wide setup for the three professions. You will recall that Dean Bergman was chosen to look after the states comprised in the Seventh Corps Area and A. R. Menary of this city to lay plans for its operation in your state. The national setup was headed by John G. Hardenbergh, Executive

Secretary of the AVMA. This is not the place to review what was accomplished. Suffice to say that the veterinary service of this country "for the duration" made an all time record that has echoed around the world. Such a result could not have been attained in World War I. At that time, there were still too many veterinarians turning up their noses at the associations. Your own was just being born, the state associations were small, and the AVMA had but 800 paid up members compared to nearly 10,000 today. I know this because I was secretary of the AVMA then and took the trouble to count noses. Result; I had the humiliating experience of being delegated to go over to France to organize a veterinary service for AEF, without a scratch about forming a veterinary service in our Army Regulations, and this in the presence of our British and French and Italian colleagues who had long since been operating under stated regulations. They reasoned that we were of the Wild West and didn't know better. The little job called for a Chicago practitioner to organize a veterinary corps while the troops were fighting. Despite the climactic débacle among horses and mules, a veterinary corps for the United States there drew its first breath of life. Impetuous M. E. Knowles, former state veterinarian of Montana wrote the masterpiece of American veterinary history the night of Nov. 11, 1918, when he remarked to me from his bunk in a shell-torn railway station near Verdun, "Major, I'm glad it's over, but I would like to have tried out this veterinary corps we've had such a hard time to build up." This means that our military veterinary service of World War I was born but still quite adolescent when the hostilities ended. And what happened at home? At stockyard and remount depots, mismanagement and high incidence of death and disease among horses and mules piled up an all-time high record. After four years of experience, the British had acquired wisdom. They put their newly procured animals on a farm at Lathrop, Mo., as you will recall, to get contact immunity to influenza before sending them to remount depots and battlefields oversea. There are perhaps many implacable truths like that to be written into the veterinary service of World War II that will have to wait until facts from Russia and Germany have been gathered, both of which used many animals for cavalry and transport operation. The use made of animals by our troops is too scattered for me to correlate here. Military authorities have claimed that cavalry enabled the Russian to drive the so-called supermen of Germany from Stalingrad to Berlin and throw consummate fear into the most atrocious gangsters of all human history. Our General Clark reports that he could have bagged many more German prisoners on the Po had he had a cavalry division attached to the Fifth Army. The fact remains that we somehow blundered through with a remarkable low ratio of animal to manpower in this war. The difference in the animal situation of World War I and World War II is that the former literally threatened to exhaust the horse and mule population of the whole world and, therefore, the nations involved assigned a stellar rôle to their veterinary corps, whilst in the latter it was the world's food supply that was threatened and thereby turned veterinary medicine toward the field of subsistence on a large scale. Veterinary medicine is that versatile. While accurate figures are being gathered, all that can be said now without any stretching of truth is that both military and civilian veterinarians did a job that has brought veterinary medicine closer to the hearts of the people, and that the future program is to heed the lesson that good organization has taught. To the next chump who asks "What good is an association?" I shall be compelled to give the impolite answer of which I've already spoken.

In concluding this particular farewell address,* war being its theme, may I suggest to you, as citizens and professional men, not to let your instincts rot from your faith in everlasting peace. Under the anesthesia of glory, men in the long past have died by such countless millions defending the greed of the human soul, that it doesn't seem at all likely that the world's population is going to frankly salute the beautiful optimism of the peacetime conference without keeping the tongue in the cheek. War still remains the only sedative man has yet contrived for relieving his self-made agony, regrettable as that is. So, it wouldn't make sense, as of 1945, to let down your guard during the long stretch of time it will take the human being to obey the Golden Rule, or to make human beings behave like the animals you handle much better in the pursuit of your daily work. I want to add also in this farewell of 1945, that you have been a set of good sports to have lent your ears so often to my pleas for a better and bigger veterinary profession for the American people. Veterinary medicine in Eastern Iowa as an instrumnt of war seems to have justified these sermons. You are to be complimented for having listened. To me Iowa veterinarians are never wrong. May you never be wrong.

*At the beginning of his address the speaker stated that he had made several farewell address in preceding years before that association.

Ferguson in Pictures

Look for December 11, 1945, contains three pages of illustrations depicting Dr. T. A. Ferguson, Lake Geneva, Wisc., performing various operations—cesarean section on a heifer, infusion of the udder, treatment of ear canker in a dog, treatment of bloat in a calf, incising an abscess—and several diagnostic procedures. Doctor Ferguson has practiced at Lake Geneva 50 years. He was president of the A.V.M.A. 1929-30 and photographs satisfactorily. The story publicizes veterinary service in a desirable manner.

Courses in Diseases of Fur-Bearing Animals Offered

Veterinarians in all ranch fur producing counties of the United States will be offered special training in fur bearing animal disease diagnosis, prevention and control under an arrangement entered into recently by the Pitman-Moore Biological Laboratories, Zionsville, Ind., and the American National Fur Breeders Association.

The plan announced by Dr. W. S. Gouchenour, director of the laboratories, is strictly for veterinarians, specific instructions along with a comprehensive educational program. supported by complete laboratory facilities for diagnosis will be offered such veterinarians and will make available to fur breeders, through veterinarians, competent disease control service in practically every community interested in the breeding of fur animals.

J. PAYNE LOWE, 1870-1945

Dr. J. Payne Lowe, AMER '91 and NAT '93, died in Passaic, N. J., Sept. 24, 1945, lacking but three months of being 75 years of age. He had long been a leader in civic affairs in his city and prominent in veterinary activities in the state and nation. He had been city veterinarian of Passaic for 53 years, probably a record in that office for any city. He served 12 years (1917-1929) as president of the state board of veterinary examiners of New Jersey.

Doctor Lowe conducted a practice in addition to fulfilling the duties of his city position and was active in state livestock sanitary work. He is credited with effecting great improvement in the sanitation and hygiene of local slaughter houses, meat markets, dairies and milk plants. He had belonged to the A.V.M.A. since 1892 and was an Honor Roll Member (more than 50 years a member) at the time of his death.

Award of Legion of Merit

Russell McNellis, Colonel, V.C., United States Army. 2 March 1942 to 15 May 1945.

John S. Haley, Major, V.C., 15 Sept. 1945.

Award of the Bronze Star Medal

Charles H. Kitselman, Lt. Colonel, V.C., for meritorious conduct in the performance of duty from 10 August 1944 to 31 August 1945.

Herbert L. Marsh, Captain, V.C., Reserve Corps, for meritorious conduct in the performance of duty 1 December 1944 to 31 August 1945.

Richard A. Shea, Captain, V.C., for meritorious conduct in the performance of duty 13 March 1945 to 26 September 1945.

Willard R. Fetzer, Captain, V.C., for meritorious service during the period 29 May 1945 to 18 July 1945.

Lewis L. Jackson, Captain, V.C., for meritorious service during the period 14 July 1945 to 3 Sept. 1945.

Jerry T. Martin, Captain, V.C., for meritorious service during the period 26 May 1945 to 28 July 1945.

Release of Veterinary Corps Officers from Army

Effective December 1st, non-regular Veterinary Corps officers are eligible for release from active military duty if their adjusted service rating is 70 or if they are 42 years of age to the nearest birthday or if they have performed forty-two months' active service.

Veterinarians Wanted for China

More veterinarians are needed to organize a livestock disease control program for China. Those interested should apply to the Director UNRRA, 1344 Connecticut Ave., Washington, D. C. Dr. H. J. Stafseth, formerly with the Michigan State College has charge of the organizing of a veterinary service for China.

Vacancies in Public Health Departments

A survey, by the U. S. Public Service, of the vacancies in the full time staffs of state, municipal and county public health services reveals 24 vacancies in veterinary positions. This is exclusive of vacancies being held open for returning veterans. The total vacancies (other than those held for return of veterans) in professional personnel in the health departments of the states is 2569, including 338 physicians and 1313 graduate nurses. As the survey included only 38 states this is assumed to be about 80% of the whole number of vacancies.

Veterinary Corps Officers Reported as Separated from the Military Services

(Supplement to the list published in the December issue, page 394)

Faulk, Archie L. ..... Alabama
Johnson, Cecil Haley ..... Alabama
Moore, Rufus O., Jr. ..... Alabama
Reineccius, Jake Louis ..... Alabama
Sugg, R. S. ..... Alabama
Butler, Lucius N., Jr. ..... Arizona
Arburua, Joseph M. ..... California
Bentham, Wilfred S. ..... California
Davis, Robert W. ..... California
Hickman, George P. ..... California
Hellmut, Kafka ..... California
Hurt, Ross H. ..... California
Kerman, Wm. R. ..... California
Maude, Stuart H. ..... California
Niemeyer, Wm. Edward ..... California
Norton, Robert Samuel ..... California
Priddy, Charles W. ..... California
Sepponen, Carl Matt ..... California
Turner, Clifford W. ..... California
Twohig, James D. ..... California
Broadwell, John M. ..... Colorado
Cooley, Richard Seymour ..... Colorado
Herzberger, Arthur C. ..... Colorado
Haworth, William A. ..... Colorado
Milliken, John C. ..... Colorado
Nagel, John K. ..... Colorado
Turner, Nathan A. ..... Colorado
Anderson, Jas. G. ..... Connecticut
Bushnell, Fred T. ..... Connecticut
Gilyard, Richard T. ..... Connecticut
Globus, Robert O. ..... Connecticut
Lorber, Martin G. ..... Connecticut
West, James Rufus ..... Delaware
Brown, Theodore W. ..... Florida
Christian, Arthur B. ..... Florida
Lord, Willys E. ..... Florida
Swanson, Leonard E. ..... Florida
Vara, Joseph J. ..... Florida
Wilkinson, Frank Burdette ..... Florida
Arundel, Hugh F. ..... Georgia
Johnson, Leon D. ..... Georgia
Stewart, Abe Lincoln ..... Georgia
Penwell, Park Hugo ..... Idaho
Barr, Theodore M. ..... Illinois
Brinker, Wade O. ..... Illinois
Cottral, George E. ..... Illinois
Grossman, Roger ..... Illinois
Guilfoil, Thomas J. ..... Illinois
Lusk, Neal D. ..... Illinois
Metz, Clark A. ..... Illinois
Miller, Leonard J. ..... Illinois
Slatter, Ervin Edwin ..... Illinois
Burns, Kenneth F. ..... Indiana
Fetzer, Willard R. ..... Indiana
Fly, Glenn O. ..... Indiana
Kucher, Paul C. ..... Indiana
Barrett, John Thomas ..... Iowa
Bolks, H. P. ..... Iowa
Bond, Thomas ..... Iowa
Bradt, Raymond K. ..... Iowa
Butler, Elliott A. ..... Iowa
Geick, Harold L. ..... Iowa
Jokerst, Herman A. ..... Iowa
Loyd, Paul T. ..... Iowa
Maichel, Geo. B. ..... Iowa
Spencer, Ralph N. ..... Iowa
Watson, Bruce C. ..... Iowa
Gale, Mark E. ..... Kansas
Kennedy, Francis M. ..... Kansas
Maichel, George B. ..... Kansas
Palen, J. S. ..... Kansas
Smiley, Henry D. ..... Kansas
Boyd, Wayne W. ..... Kentucky
Bowers, Grafton D. ..... Louisiana
Broussard, Geo. P. ..... Louisiana
Bryson, Bernard G. ..... Louisiana
Kaskin, Samuel T. ..... Maine
Levine, Samuel J. ..... Maine
Dinkel, John H. ..... Maryland
Kerr, Virgil M. ..... Maryland
Morse, J. B. ..... Maryland
Richman, Silas ..... Maryland
Rohrer, Raymond R. ..... Maryland
Vandeven, John Wm. ..... Maryland
Winchester, Ben N. ..... Maryland
Boardman, Wm. ..... Massachusetts
Case, Lewis I. ..... Massachusetts
Olson, Carl, Jr. ..... Massachusetts
Shannon, William H. ..... Massachusetts
Court, Maurice J. ..... Michigan
Jensen, Christian G. ..... Michigan
Waddell, Wm. F. ..... Michigan
Walters, Maurice K. ..... Michigan
White, Edward S. ..... Michigan
Cottrell, Grant F. ..... Minnesota
Enge, Percy C. ..... Minnesota
Garlie, Adolph O. ..... Minnesota
Gochinauer, Oscar B. ..... Minnesota
Karkon, Alfred G. ..... Minnesota
Karlson, Alfred G. ..... Minnesota
Long, Elmer I. ..... Minnesota
Peterson, Alfred ..... Minnesota
Schmidt, Clarence P. ..... Minnesota
Scott, John R. ..... Minnesota
Vollmar, Roland E. ..... Minnesota
Zlotnick, Albert M. ..... Minnesota
Brown, Francis H. ..... Missouri
Calloway, Hugh P. ..... Missouri
Garrett, John P. ..... Missouri
Millenbruck, Edward W. ..... Missouri
Poley, Linn S. ..... Missouri
Schulz, Carl Wm. ..... Missouri
Shelby, Clarence F. ..... Missouri
Duey, Fernley W. ..... Nebraska
Johnson, John C. ..... Nebraska
Price, Willet J. ..... Nebraska
Smith, Edwin J. ..... Nebraska
Key, Joseph B. ..... Nevada
Lawrence, Robert P. ..... New Jersey
Reinow, Bert ..... New Jersey
Shomer, Robert R. ..... New Jersey
Evans, Tom ..... New Mexico
Moore, Andrew A. ..... New Mexico
Bolin, Walter L. ..... New York
Close, Philip C. ..... New York
Curtin, Charles J. ..... New York
Eichhorn, Ervin A. ..... New York
Ensign, David T. ..... New York
Goldwasser, Harry I. ..... New York
Klar, John M. ..... New York
Lawrence, Thomas ..... New York
Martin, Kenneth H. ..... New York
McKim, Orville E. ..... New York
Phelps, Harold C. ..... New York
Sherwood, Wm. J. ..... New York
Steffen, Rudolph ..... New York
Stieber, Sam ..... New York
Tanenbaum, George G. ..... New York
Whitehead, Roland G. ..... New York
Wiseman, Edwin S. ..... New York
Woodruff, Raymond A. ..... New York
Thomson, Burton C. ..... North Carolina
Sadler, Kenneth Earl ..... North Dakota

Bechtol, Lauren L. ..... Ohio
Folsom, Robert H. ..... Ohio
Gest, John Frazee ..... Ohio
Harris, William K. ..... Ohio
Herman, Leslie F. ..... Ohio
Hurkle, Truman B. ..... Ohio
Hook, C. Johnson ..... Ohio
James, Harold D. ..... Ohio
Jones, Kenneth S. ..... Ohio
Kneup, Frederick G. ..... Ohio
Lynch, Leland C. ..... Ohio
Maike, Arthur A. ..... Ohio
Michael, Lloyd J. ..... Ohio
Reed, Wesley R. ..... Ohio
Stephan, Sol Galen ..... Ohio
Washburn, Paul M. ..... Ohio
Wilson, Wells Mc. ..... Ohio
Harkavy, H. J. ..... Oklahoma
Shea, Richard A. ..... Oklahoma
Shigley, Fred Martin ..... Oklahoma
Crow, Wilfred M. ..... Oregon
McCornack, Rodwin C. ..... Oregon
Riker, Joseph T., Jr. ..... Oregon
Russ, Robert S. ..... Oregon
Shurman, Richard D. ..... Oregon
Abell, Guy F. ..... Pennsylvania
Chrisman, Robert F. ..... Pennsylvania
Craige, John E. ..... Pennsylvania
Hoffman, William F. ..... Pennsylvania
Lee, John M. ..... Pennsylvania
Snyder, Arnold M. ..... Pennsylvania
Belinsky, Joseph ..... Rhode Island
McGilvray, John H. ..... South Dakota
Peterson, Vernon S. ..... South Dakota
Bender, Jack D. ..... Tennessee
Anderson, Dan J. ..... Texas
Bell, W. T. ..... Texas
Booth, Thomas O. ..... Texas
Burch, George R., Jr. ..... Texas
Burke, William Zebulon ..... Texas
Burkey, Fred M. ..... Texas
Chapman, Lee R. ..... Texas
Chastain, Claude B. ..... Texas
Couch, J. B. ..... Texas
Hander, Raymond T. ..... Texas
Lusco, Robert P. ..... Texas
Martinez, Homer T. ..... Texas
Myers, Philip ..... Texas
Robinson, Virgil B. ..... Texas
Scholle, Carl H. ..... Texas
Schott, Francis J. ..... Texas
Spangler, Harold M. ..... Texas
Steinman, Frank C. ..... Texas
Thompson, Wm. M. ..... Texas
Walker, Joseph W. ..... Texas
Cole, Elvin George ..... Utah
Bowen, Leroy E., Jr. ..... Virginia
Schachter, Jacob J. ..... Virginia
Sipos, Andrew James ..... Virginia
Watson, Douglas F. ..... Virginia
Anderson, Walter A. ..... Washington
Bailey, Orlen Leighton ..... Washington
Finch, Dell C. ..... Washington
Folger, George ..... Washington
Guard, Paul ..... Washington
Mendenhall, William ..... Washington
Younce, Ralph R. ..... Washington
Bennett, Paul Clifford ..... Wisconsin
Cooper, Arthur Washburn ..... Wisconsin
Currie, Arthur J. ..... Wisconsin
Lang, George Kendrick ..... Wisconsin
Law, Buell Stanley ..... Wisconsin
Taylor, Irwin A. ..... Wisconsin
Humphreys, Virgil J. ..... Wyoming

Veterinary Refresher Course

The New York State Veterinary College at Cornell University, Ithaca, New York, announces that the first session of its Post-War Refresher Course of six weeks' duration will open January 7, 1946. Admission will be limited to ex-service men who are graduates of veterinary schools approved by the American Veterinary Medical Association.

The basic course will be four weeks in length. During the final two weeks the participating veterinarian will be allowed, on an elective basis, an opportunity of working in either the Small Animal, Large Animal, Surgical, or the Ambulatory Clinics; or in the Department of Anatomy, Physiology, Bacteriology, and Pathology, and the Experiment Station.

The course will be given by regular staff members, assisted by a few special lecturers. Emphasis will be placed on practical applications of new methods and new remedies that have come into use within the last few years, rather than to attempt a general review of all veterinary subjects.

A registration and tuition fee of $37.50 will be charged for the six weeks course. There will be no other fees. Students will be expected to supply their own books, special clothing and other supplies needed for their work. Veterans eligible under the "G. I. Bill of Rights" or the Vocational Rehabilitation Law may receive books or supplies in limited amounts if they are unable to furnish them from their own libraries or equipment. No responsibility is accepted for meals and housing in Ithaca, but it is expected that enough single and double furnished rooms will be available to accommodate those attending. Due to the great increase in the number of married veterans now at Cornell furnished apartments will not be available.

The returning veteran who has been discharged will be eligible under the "G. I. Bill" or the Vocational Rehabilitation Law to receive both tuition and subsistence allowance for this course. Men on terminal leave will not be eligible for such benefits before the date of expiration of leave.

A maximum of forty students will be accepted for the course. It is expected that if there is sufficient demand the course will be repeated at a later date.

Inquiries about this course may be directed to the Director of Post War Refresher Courses, Dr. Hadley C. Stephenson, New York State Veterinary College, Cornell University, Ithaca, New York.

Abstracts

Vaccination Against Johne's Disease

Many factors are probably involved in the establishment and spread of Johne's disease in a herd. There are many herds in which only occasional, clinical cases occur; the incidence over the years has shown no tendency to increase and the economic loss remains small. In such herds the use is not justified of any vaccine yet developed. In other herds, the infection is widespread, clinical cases are many and the economic loss is high. In such herds it is generally recognized that there is no practical or reliable method of controlling the disease and that eradication is a difficult, expensive and long-drawn out procedure. Except a herd is of exceptional value it is questionable if it be economically sound to attempt eradication.

Severe infection of Johne's Disease

It was hoped, at one time, that the johnin test would provide a solution to the control of the disease, but it has not yet fulfilled this expectation and eradication by repeated testing is not at present practical; since it fails to induce a reaction in a percentage of preclinically infected animals, many of which are undoubtedly excreting Johne's bacilli. This procedure possesses the additional fault of producing a strong reaction in non-infected animals that are sensitized by avian tubercle bacilli.

Doyle[101] conducted a number of experiments with animals vaccinated according to the method of Vallée and Rinjard, which consists of the subcutaneous ingection of virulent Johne's disease organisms suspended in a non-absorbable medium (paraffin). From his experiments the author concludes:

1. The results support the experience of Vallée and Rinjard that the method involves no spread of the disease; i.e., is a safe procedure.

2. The vaccine devised by Vallée and Rinjard for the protection of cattle against Johne's disease merits a trial in the official project for control of the disease.

3. At present its use should be limited to young (and presumably non-infected) calves in heavily infected herds.

[101] Doyle, T. M. Vaccination against Johne's Disease. *Vet. Rec.*, 57:33, pp. 385-387. 1945.

* * * *

Outbreaks of Abortion in Ewes

Outbreaks of vibrionic abortion were investigated[102] in 1944 in two flocks of sheep. In one flock containing 290 ewes, only one ewe aborted. *Vibrio fetus* was isolated from the aborted fetus. The ewe was isolated for three days and there was no spread of the infection to other members of the flock. In the second flock, which contained 1200 ewes, 650 aborted of which 25 died from causes attributed to the infection. Others required months to recover. The owner placed his loss as a result of the outbreak at $3500.

Water from the infected ranch did not allow the recovery of *V. fetus* nor produce abortion in two experimental ewes. Intravenous injection of 1cc of culture from one outbreak produced a probable, early abortion, and three drops instilled in the eye of a ewe, was thought responsible for a post-parturient infection. The disease is probably comparable to brucellosis in many respects, and aborting ewes rather than the drinking water are suggested as the source of infection.

* * * *

Inheritance in Mastitis

The mastitis histories of two families of cows, based on leucocyte counts, strip-cup tests, physical examination of the udder, and bacteriological tests, were studied[85] for a period of six years. One family, composed of the dam, three daughters and two grand-daughters, was infected with streptococci during 24%, and with staphylococci during 39.3%, of its milking time; the other family, composed of the dam, four daughters and two grand-daughters, showed the comparable figures of 0.9% and 10.9% respectively. The above confirmed the relative susceptibility to mastitis of the one family. There was no significant difference in milk and butter-fat production of the two families.

It was concluded that heredity definitely plays a part in bovine udder infection and mastitis.—D. N. S. in *Vet. Bul.*

[102] Ryff, J. F., and Lee, A. M. Vibrio fetus in sheep. *Am. J. Vet. Res.*, 6, pp. 159-158. 1945.

[85] Murphy, J. M., Pfau, K. O., Lepard, O. L., and Bartlett, J. W. Comparison of the incidence of udder infection and mastitis in two cow families, *Cor. Vet.*, 34, pp. 185-192. 1944.

Book Reviews

Shepherd's Empire. By *Charles Wayland Towne* and *Edward Norris Wentworth.* Illustrated by *Harold D. Bugbee.* 364 pages. Published by University of Oklahoma Press, Norman, Okla., 1945. Price $3.50.

Sheep came into the Southwest more than 400 years ago as subsistence for military exploring expeditions. The expeditions fought Indians all the way over thousands of miles of arid wastes and precipitous mountains. At such missions as they established the inhabitants were usually massacred and their flocks wiped out, soon after the soldiers withdrew. This continued for 150 years, after which time the captain-general was replaced by the padre as head of the expedition and successful colonization was achieved. In the 100 years following 1690, a large number of missions were founded in the vast area from the French frontier (Louisiana) to the Pacific coast. Each mission owned a great band of sheep.

Photo E. T. Baker

In the heart of The Shepherd's Empire

With the coming of the 49ers the great demand and the high prices paid for mutton brought about the trailing of huge bands, containing, often, up to 10,000 sheep to Sacramento. Some of these bands were driven 1500 miles. When the territory as far as New Mexico had been depleted of its surplus stock just before and after the civil war, sheep were driven to California from the central states as far east as Michigan. Soon, however, the traffic was reversed and bands were driven from California to the mining camps of Montana, the feedlots of Colorado and even the cornfields of Nebraska.

Throughout three centuries of its development this immense industry that now annually contributes 27 million animals to our food supply and produces half our national consumption of wool had to contend with adversity every step of the way. Marauding bands of Indians lurked on the trails, awaiting an opportunity to massacre the attendants and drive off the animals. Sneak thief whites stole the sheep by dozens and thousands and were not adverse to murders of convenience. The flocks starved in the frequent drouths and perished in blizzards. They succumbed to poisonous plants and were preyed upon by wild animals and, in the closing decades of the century, came the sheep-cattle wars for the grazing lands — perhaps the bloodiest conflicts of all with clashes with "squatters" thrown in for good measure.

This is the setting for the authors' saga which is amazingly well told. They have compiled a tale from official records, from works of contemporary and more recent writers, from verbal accounts of their many acquaintances whose experiences date back to the cattle wars and from their own, not inconsiderable, knowledge of the sheep country and the sheep industry, of civilization's spread across the American wilderness; for from the coming of Columbus, to almost the beginning of the present century, sheep were the backbone of supplies for scores of exeditions of exploration and for every army that spread over the Western Hemisphere.

* * * *

Crossroads for Penelope. By *Mary Wolfe Thompson.* 265 pages. Published by Longmans, Green and Co., New York and Toronto, 1945. Price $2.00.

This is a continuation of the story "Pattern for Penelope" (reviewed in the August 1944 issue, page 328) in the same setting, Doctor Drake's small animal hospital, and with, in the main, the same characters. While the story, like the former, revolves about cases treated in the hospital and the work of the characters there, the war and various uniforms and Dogs for Defense, are introduced. As before the portrayal of veterinary practice as it concerns pet animals is accurate and friendly.

Of course in the end Penny marries Tom who had taken a course in veterinary medicine while in the Army. Now that the war is over they will probably set up a practice of their own. Pet animal practice having been thoroughly canvassed in the preceding stories it is

hoped their practice will be with the food-producing animals.

* * * *

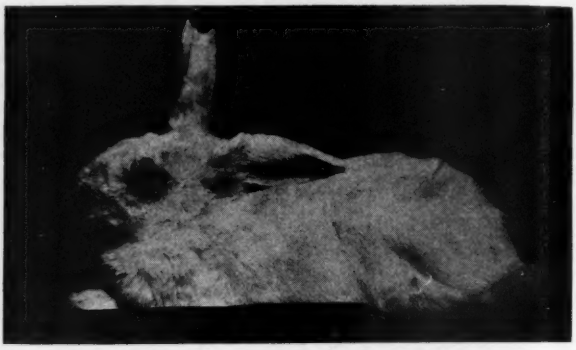
Rabbits' Ailments. By *W. P. Blount*, Ph.D., F.R.C.V.S. Major, Royal Army Veterinary Corps; Chief Veterinary Officer, East Sussex County Council; Author of Poultry Ailments. Paper bound, 170 pages, 35 illustrations. Published by "Fur and Feather," Idle, Bradford, England, 1945. Price, $1.00 including import duty and postage.

This is a most satisfactory little work in the space of 100 pages devoted to a consideration of separate ailments, 35 specific and 68 non-specific diseases or perversions are discussed. The longest discussions occupy barely two pages, the average length is less than a page; yet in general the cause, symptoms, lesions, treatment and means of prevention are given for each ailment. This brevity is achieved chiefly by the author's highly developed faculty of using a period when he has said his say, *on the subject.*

The work is divided into four parts. Part III, Specific Diseases and Part IV, Non-Specific Diseases, have already been mentioned. Part I, The Rabbit in Health, and Par II, Introduction, contribute to conciseness in the discussions that follow by supplying general information applicable to various differing ailments and conditions, thus avoiding its repetition in the discussion of each of them.

Part I, The Rabbit in Health, includes a discussion of the eyes, ears, snout, blinking, nasal twitching, teeth, tongue, mastication, coat, stamping, attitudes, movement, head and neck, chest and abdomen, stomach, coprophagy, fecal pellets, genital organs, mating, pregnancy, mammae, teats and milk. The urine, respiration, artificial respiration, temperature, the voice, weeping, sleeping, anesthesia and newborn rabbits and their development, all in 40 pages of type. Part II in one-half that space includes discussions of: the danger period signs of impending death, killing, post-mortem examination, symptoms of disease (six pages; the longest discussion in the book), common causes of ailments, the incidence of disease in rabbits and diseases communicable from rabbits to man.

The work is largely a record of the author's experience in his own rabbitry. Two important omissions are discussions of feeding and of housing, which are mentioned only for their direct connection with disease. The illustrations are all original.



Myxomatosis in the rabbit showing excessive edema of muzzle and ears

Stallion Road. By *Stephen Longstreet.* A novel of 303 pages. Published by Julian Meesner, Inc., New York, 1945. Price $2.75.

Like Dutch Vet, Hoss Doctor, Pattern for Penelope, this is a story built around a veterinary practice. Unlike the others, in this the author fails in considerable degree to get his scientific mantle on straight. However, as such inaccuracies border on the spectacular they probably enhance the work for the general reader, albeit at times exasperating to the veterinary reader.

The locale is a group of horse ranchers in the foothills in California. Dr. Larry Hanrahan, an exceptionally able young veterinarian, owns one of these ranches—Stallion Road. As on the others horse raising is a liability and Larry's large but not too prosperous practice fails to meet the annual deficit. The characters are mainly distinctly horsy folk. Doctor Hanrahan is frustrated in horse breeding, in practice, in love and in research and in the end dies of anthrax.

* * * *

Medical Uses of Soap.—The entire edition of this work reviewed in the August issue (page 286) of VETERINARY MEDICINE, has been purchased by Proctor & Gamble Company of Cincinnati who will supply copies free to physicians and veterinarians on request.

Any book reviewed in these pages, or any other book if available, may be obtained by remitting the published price to VETERINARY MEDICINE, 7632 S. Crandon Ave., Chicago 49. Bulletins and Circulars should be requested direct from the address given in the notice. Generally they are supplied free unless a price is stated.

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VETICILLIN (penicillin) has definite advantages over other treatments in general use—It exerts powerful destructive action on gram-positive organisms, including *Streptococci, Staphylococci,* and *Corynebacteria*—It is safe and effective in either acute or chronic mastitis—It is not inhibited by the presence of milk or serum—It is relatively nontoxic and nonirritating to delicate udder tissue.

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1. Bryan, C. S.; Horwood, R. E., and Huffman, C. F.: Vet. Med. 40:87 (Mar.) 1945.
2. Murphy, J. M., and Pfau, K. O.: Cornell Vet. 35:88 (April) 1945.
3. Slanetz, L. W., and Allen, F. E.: J. A. V. M. A. 18:107 (July) 1945.

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At present hybrid corn is planted in two-thirds of the total corn acreage in the United States. But in the cornbelt the percentage is much higher—said to be 100% in Iowa, 99% in Illinois and 97% in Indiana.

■

The winner for 1945 in the annual Swift & Company college essay contest is Fred L. Finke, a pre-veterinary medicine student at Texas A. & M. College. The title of his essay was "How Packing Plants Distribute Their Products." Mr. Finke was given a two-week trip to Chicago where he will take a market study course and visit the livestock show.

■

Little Marie on her first visit to a farm was watching the hired man milk the cows. He offered here a glass of fresh milk.

"Well, what do you think of it?" asked the hird man.

"It's awful good," replied Marie, smacking her lips. "I wish our milkman had a cow.—*Certified Milk.*

■

In a series of newspaper ads, John Morrell & Co. are featuring veterans who are discharged from the armed forces and are back working for the company. Under the title "They're Coming Back" each ad pictures a returned veteran giving briefly his service record and his present work with the company. Returning veterans are welcome whether they were employed by Morrell before the war or not.

■

Garter Snake Litter Measures Over 32 Feet

Fifty-two offspring of a 36-inch garter snake, if placed end to end, would measure over 385.7 inches in length. Since common garter snakes in Ohio usually have from 14 to 30 young, a litter of 57, only three of which were stillborn—and two escaped before they could be measured—is quite unusual, John Thornton Wood of the Dayton Public Museum states in the scientific journal *Copeia.* While the average total length of the young snakes was 7.4 inches, the shortest was 6.65 inches and the longest 8.0 inches.—*Sci. N. L.*

■

Origin of Dog Licensing

Dog licensing in New York State began in 1789 through an act of the legislature entitled "An act to encourage the raising of sheep and to prevent injury by dogs. In 1844 New York State was the largest sheep-producing state in the Union and they raised more sheep than any other state raises today except Texas. In 1944 over one million dollars was collected for license fees for the 530,000 dogs in the state—the largest amount on record. The law now protects all domestic animals and, except for moneys needed to maintain license bureau, tags, etc., the fees collected go to the various county treasurers and the law is enforced by local officials—some counties have dog wardens. Farm people benefit from this law in proportion to extent of enforcement by local officials.

By using a filter of crushed bone, which has a strong affinity for fluorine, water with an excess of the element can be reduced to a safe level. A patent for the process has been issued.

■

A Borden Scholarship Award in Veterinary Medicine at Kansas State College has been accepted by the president, Milton Eisenhower. The award is valued at $300 per year and only senior students are eligible and is based on the excellence of accomplishment in the three years preceding the senior year. Deposit of moneys for awards for five years has been made to the college.

■

It has been found by a University of California entomologist in large scale field tests that when DD (dichloropropane dichloropropylene—a relative of DDT) is introduced into the soil with a special drill it is effective in the control of wire worms in the soil. About 400 pounds to the acre is needed to combat these insects which feed on roots and tubers of plants.

■

In testing 50 varieties of potatoes, the Maine experiment station and the U.S.D.A. observed that the pink-eyed and pink-skinned varieties tended to be low in vitamin C. When fresh and raw, potatoes were found to equal ripe field grown tomatoes in vitamin C content—22 to 39mg per 100gm of fresh weight. However, this applied mainly within two or three months of harvest.

■

By the use of a mixed culture of lactabacillus and mycoderm (a yeast-like organism) with whey, keeping the acidity of the whey within a certain range by slaked lime, over 95% of the milk sugar can be converted into lactic acid. Since most lactic acid has heretofore been made through fermentation of sugars, the above process developed by the Bureau of Dairy Industry of the U. S. Department of Agriculture should be of great economic importance since there are 10 billion pounds of whey produced annually as a by-product of cheese.

■

Praise for Illinois Veterinarians

State Senator Simon E. Lantz, Chairman of the Agriculture Committee of the Illinois Senate and a prominent figure in the cattle industry of the state in an address at a meeting of the Northern Illinois Veterinary Medical Association stated: "I believe if the veterinarians of Illinois were permitted to use their best judgment—[in the brucellosis control project]—we in Illinois would be many years ahead of where we are now," and "we, as livestock breeders, feel that the state of Illinois should stress with much more emphasis an all-out calf vaccination program, cut out the frills and vaccinate. With three million cattle in the state, we can readily see that it is impossible to include blood testing to an efficient degree if calf vaccination is to be accomplished."